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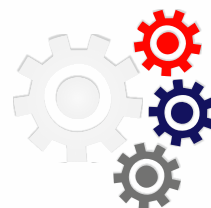
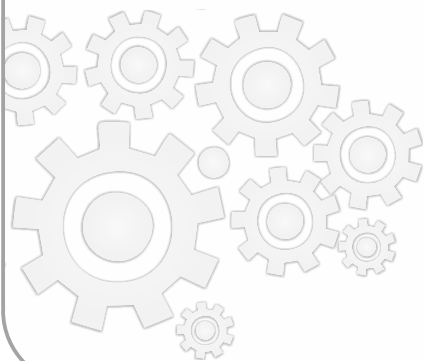


**International Conference on European Integration 2018**

***ICEI 2018***

**Proceedings**  
of the 4<sup>th</sup> International Conference  
on European Integration 2018

**May 17 – 18, 2018**  
**Ostrava, Czech Republic**



**VŠB - Technical University of Ostrava**

**Faculty of Economics**

**Department of European Integration**

**Proceedings of the 4<sup>th</sup> International Conference  
on European Integration 2018**

***ICEI 2018***

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**Ostrava, Czech Republic**

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VŠB - Technical University of Ostrava  
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## Foreword

*Ladies and gentlemen, dear readers,*

*It is a great honour to have the opportunity to address you at the fourth edition of the International Conference on European Integration held biannually in the Moravian-Silesian capital, Ostrava.*

*Looking from the perspective of the Czech Republic, year 2018 is a year of many historical commemorations. We celebrate one hundred years since the foundation of the independent Czechoslovak state, as well as twenty-five years since the day independent Czech Republic emerged as an actor in the European and international relations. Unfortunately, not only celebratory moods are currently apparent in the Czech politics, media and society. The rise of anti-EU sentiments is highly worrying, to say the least.*

*It is without doubt that the EU membership has brought, and will continue to bring, many benefits; not only to us but to the entire Central European region. Sadly, however, the ample benefits are frequently forgotten and neglected, while the current debate generally appears biased. Attention is given to particularities, while the big picture is often forgotten.*

*It is hence very encouraging to see that conferences and events such as this one help to shape the public debate by putting positives and negatives of the EU into broader perspective and maintaining focus on the undeniable advantages of European integration. Unbiased, qualified work with information and promotion of critical thinking are crucial for understanding of the complexity of the EU as well as for its functioning and driving processes. Furthermore, it is only this comprehension that enables clarification of myths, hoaxes and fake news that mislead many and send them on pursuit of a non-existent enemy.*

*That is why I would like to thank everyone involved for organising and participating at this event, which will surely help to "fight the fog" surrounding the debate on the benefits of European integration. Not by sword, but by the power of words, facts and active participation in public debate.*

*Wishing you an inspirational experience,*



*Dana Kovaříková*

*Head of the of the European Commission  
Representation in the Czech Republic*



## Foreword

*Ladies and gentlemen, dear readers,*

*The fourth year of the International Conference on European Integration 2018 (ICEI 2018) is being held just after 60 years since the history of the current European Union started to be written. During the last six decades, the European integration process has brought thousands of families a life in peace and economic welfare and the European Union has become one of the world superpowers. However, while building a prosperous and stable continent, the European Union had to overcome different obstacles. The European Union also currently has its inner troubles and illnesses that it is unable to cover up, but only solve and, in this way, to struggle against disintegration moods in the society. We have to keep the original ideas of the fathers of the European integration process in our minds, because only a strong and uniform European Union at home can also be strong in the world. The European Union has to face new challenges in the global environment to be able to remain among the world leaders in the future.*

*We believe that the conference ICEI 2018 will be a suitable platform for the discussion about the grey areas of the current European integration process and will bring valuable knowledge to all people who are interested in the European integration matters.*

*Wishing you an inspiring experience,*



*Lukáš Melecký*

*Head of Department of European Integration  
Faculty of Economics  
VŠB - TU Ostrava*



*Lenka Fojtíková*

*Conference Guarantee  
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## **The Role of Alternative Investments in the Development of Capital Markets: in Terms of the Transformation of Georgia with the EU**

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### **Abstract**

*In the modern economy investment plays an important role. Investment diversification ensures the development of various markets, including the development of the capital market, which depends on the socio-economic situation of the country and the financial policy. Therefore, it is important to review Georgia's, as a post Soviet country's capital (loan) market with State Securities, which is an important area of alternative investment. According to Georgia-EU Deep and Comprehensive Free Trade Area Agreement (DCFTA) Georgia has taken the obligation to make capital market compatible with the EU market, including the possibility of forming alternative investments and prospects for its development. Therefore, it is important to conduct a comparative analysis with the country of similar data with Georgia within the EU and reveal the possibility of alternative investments development and the supportive factors that may affect the decision of the potential investor.*

**Keywords:** *alternative investments, association agreement, EU capital market, eurobonds, inflation, state securities*

**JEL Classification:** *E20, E22, E27, E44*

### **1. Introduction**

Alternative investments are not confined by shares or bonds; there are various types of investments that can be considered as alternative ones because they do not belong to general characteristic group of investments. For instance, according to Avdiushkin speculation deals on the world product markets, purchase of banking organizations under bankruptcy and restructuring as well as investments in artworks may be assumed as one of the types of investments (Suchkova, et al., 2012, p.1).

The significant characteristic of alternative investments is a circumstance that success in such activities does not depend on market condition and/or trends but investor's qualification, practical skills and experience.

According To Anshin Alternative Investment Market (AIM) has been in operation since 1995 with the London Stock Exchange that ensures financing new, increasing companies and offers them advantage to issue securities and circulate shares (Suchkova, et al., 2012, p.1).

One of the main obstacles met by institutional investors upon assessing alternative investments is policy definition for investor: which alternative investments are to be included in its portfolio and in what proportion. We assess investments, which are typical for an institutional investor and offer to define that policy, which will be based on long-term return of capital in consideration of the nature of the risk, as well as other factors that are unique for alternative investments.

### 1.1 Investment Policy Analysis

Generally, mixed investment policy analysis is based on historic data (Gaurav, et al., 2003). Such approach is acceptable for ordinary assets that are frequently traded and observation on their prices may be carried out based on historic data. But from our point of view, historic data is significant to use for alternative investments for the purpose of political analysis, as those data is available for further assessment.

Return on assets and risk assessment, which is used both in ordinary and alternative investments policy is to be perspective as well as effective and reflect connection of basic economic risks with regard to assets. Historic dynamics of data implies both findings.

While elaboration of distributive policy, ordinary and/or alternative investments are important to use purposefully and assess riskiness of asset taking into account its return ability and various findings (for example, increase of asset price).

It is fact that in institutional investors' portfolio share of alternative investments is not extensional what could be recommended by optimization based on historic data. Such observation and approach is not new. Many authors, such as Brown, Goetzmann and Park [1999] Swensen [2000], and Asness, Krail, and Liew [2001] criticized historic income and risk parameters, which were used during such analysis (Terhaar, et al., 2003, p.102).

**Table 1: Conventional and Alternative Investments—Historical Return, Volatility, and Correlation Characteristics\***

		Return	Volatility	1	2	3	4	5	6	7	8
1	U.S. Equity	14.8%	12.8%	1.00	0.55	0.35	0.24	-0.46	-0.01	0.33	0.71
2	Ex-U.S. Equity	13.2	16.7	0.55	1.00	0.14	0.29	0.00	0.39	0.25	0.52
3	U.S. Fixed-Income	10.5	7.0	0.35	0.14	1.00	0.73	-0.47	-0.05	0.17	0.31
4	Ex-U.S. Fixed-Income	10.7	6.0	0.24	0.29	0.73	1.00	-0.10	0.23	-0.08	0.14
5	Private Equity	20.7	10.5	-0.46	0.00	-0.47	-0.10	1.00	0.47	-0.53	-0.30
6	Real Estate	7.8	5.9	-0.01	0.39	-0.05	0.23	0.47	1.00	-0.51	-0.18
7	Natural Resources	18.3	8.8	0.33	0.25	0.17	-0.08	-0.53	-0.51	1.00	0.23
8	Hedge Funds	18.2	9.4	0.71	0.52	0.31	0.14	-0.30	-0.18	0.23	1.00

\*Based on annual logarithmic excess returns 1981-2000 (Natural Resources 1987-2000).

Source: Wilshire, MSCI, Salomon, NCREIF, Venture Economics, Ibbotson Associates, Adams Street Partners, UBS Global Asset Management, hedgefund.net.

In order to define alternative investments, the important method is to define clearly importance of those investments that belong to only alternative. For example, Marc J.P. ANSON, and Donald R offered five types of alternative investments in the book, *An Introduction to core Topics in alternative Investments*”:

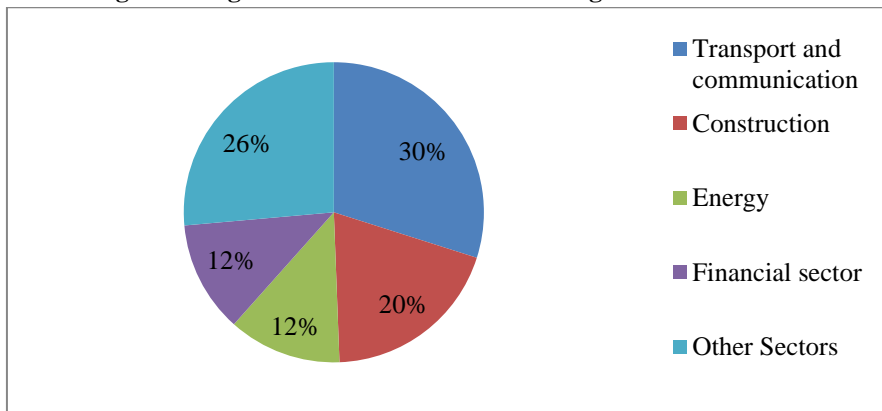
1. Real Assets (including real estate, real estate investment trusts, land, and infrastructure);
2. Hedge Funds;

3. Commodities;
4. Private equity (including mezzanine and distressed debt);
5. Structured Products (including credit derivatives) (CAIA Association, et al [online], 2012).

In the modern studies more and more attention is paid to addressing alternative investments in production of ecologically healthy goods. Consequently, investing in agricultural production is considered as one of the important sphere of alternative investments, namely, construction of “green houses” and increasing support from the side of the state makes really attractive that sphere for investments (Kendall, [online], 2016)

It should be mentioned that alternative investments under traditional understanding do not include putting up of money in securities and therefore, type of such capital investment is considered as portfolio investments. But in our opinion, difference in that approach and classification of investment types should be made based on social-economic and historic experience of a specific country. Georgia represents a post-soviet country, where no type of investments had been made till 1993. At the contemporary level, market for making investments is quite limited for local population and enterprises and capital market for securities in the process of formation and improvement. Accordingly, the question is raised in logical order: for those countries as such as Georgia, what can be considered as source of alternative investments? The answer can be controversial and different from traditional approach. Based on the previous year’s data in Georgia the volume of foreign direct investments in the agricultural sector amounted for \$ 5 million US dollars (according to III quarter of 2017 foreign direct investments were \$505 million US dollars). The volume of investments in agricultural production is very low. At the same time, the most spheres to be assumed in traditional alternative investments do not exist in Georgia; for example, Hedge Funds; Private equity (including mezzanine and distressed debt); Structured Products (including credit derivatives). Investments in transport and communication as well as in construction require large amounts that are not optimal capacity and option for most investors (FDI [online], 2017).

**Figure 1: The Largest Foreign Direct Investments According to the Sectors of Economy**



Source: www.geostat.ge, National Statistics Office of Georgia, (2017)

Therefore, we can discuss what should be considered under alternative investments taking into account the Georgian practice and such sphere and object is to be offered for investments, which really will be alternative possibility to putting up of money for the Georgian population



and can involve majority of the active part of the population. From our point of view, in case of Georgia, market for state securities will give such opportunity in consideration of certain changes and additions and the foreign practice.

It should also be noted that according to the Tax Code of Georgia (Article 82.1.T.U), the income received from government securities is exempt from income tax, which is an additional stimulus for investment.

## **2. Problem Formulation and Methodology**

### **2.1 Study Methods**

The study uses statistical and dynamic data from different countries (including the post-socialist countries, which are members of the EU), which represent the development and capacity of the alternative investment market, as well as legislative acts that are important for business entities.

### **2.2 Characteristics of Release-Reporting for Georgia-European Union State Securities**

#### **2.2.1 Georgia**

In Georgia the following types of state securities are used: treasury obligation, treasury and state bonds. Treasury obligation is short-term discount state securities issued by the Ministry of Finance. Issuance of treasury obligation is carried out during the period up to one-year, with discount and covered by nominal value. Treasury bond is mid-term coupon state securities. Currently, treasury bonds are issued with the period of 1-10 years by paying coupon in 6 months. Issuance of state securities is carried out in national currency in intangible form. Nominal value of one state security is 1000 GEL. State securities are sold via auction. Auction is conducted by the National Bank of Georgia at auction dates announced in advance. Owner of securities may be legal and physical persons, residents and non-residents; Purchase of securities is possible for resident and non-resident legal and physical persons through any commercial bank of Georgia. The sum volume of own statement presented in auction by each bank must not exceed 75% of declared emission volume. The sum volume of statement for one client presented by each bank must not exceed 50% of declared emission volume.

Issuance, circulation, reporting and coverage of treasury obligations and treasury bonds by the Ministry of Finance of Georgia are regulated by the relevant provision.

In March 2006, the government of Georgia and the National Bank of Georgia concluded an agreement “on measures to cover indebtedness of the government of Georgia to the National Bank of Georgia”. Based on the agreement, the part of indebtedness within the amount of 832.9 million GEL as of 17 May 2006 will be transformed in bonds on an annual basis, with the period of 16-60 months. Indebtedness will be completely covered in 2030. The bonds may be used by the National Bank for open market operations.

Public offer of state bonds is carried out via auction of state bonds. Commercial banks and resident and non-resident physical and legal persons with the support of commercial banks have the right to participate in auction. Issuance of state bonds is made in national currency. Conduction of auction is based on multiple-price method (State Securities [online], 2018).

Purchase price for one treasury obligation is calculated as follows:

$$\text{Price of purchase} = \frac{\text{Nominal Value}}{1 + \left[ \frac{\text{Interest rate}}{100} \times \frac{\text{Number of days left to coverage}}{365} \right]} \quad (1)$$

Purchase price for one treasury bond is calculated in the following way:

$$P = \frac{F}{\left(1 + \frac{i}{n}\right)^w} \left[ \frac{R}{n} \times \frac{\left(1 - \frac{1}{\left(1 + \frac{i}{n}\right)^N}\right)}{\left(1 - \frac{1}{\left(1 + \frac{i}{n}\right)}\right)} + \frac{1}{\left(1 + \frac{i}{n}\right)^{N-1}} \right] \quad (2)$$

where,

- P – purchase price;
- F – nominal value of treasury bond;
- i – annual interest rate offered by auction participant divided in 100; n – number of coupon payments during year;
- W – number of days between purchase date of treasury bond and next date of coupon payment divided into 7/10 number of days between coupon payments;
- R – interest rate of annual coupon income divided into 100;
- N – number of non-paid coupons left before coverage of treasury bond.

Noncompetitive statements will be satisfied with average weighted percent, which will be calculated in the following way:

$$C = \frac{\sum(N \times P)}{\sum(N)} \quad (3)$$

where:

- C – average weighted percent;
- E – sum;
- N – nominal value of competitive statement satisfied in auction;
- P – interest rates of satisfied statements;

Coupon to be paid will be calculated as follows:

$$Q = N \left( \frac{P}{2} \right) \quad (4)$$

Where:

- Q – price of coupon;
- P – coupon rate;
- N – nominal value of treasury bond (Provisions [online], 2015).

Comparative analysis between profitability of state securities with different terms and inflation (table 2) showed that the practice of Georgia does not consider state (treasury) obligation and correction of bonds with regard to inflation rate, what by itself does not make attractive securities for potential investors (State Securities Emissions [online], 2017).

**Table 2: State Securities Emissions in 2017**

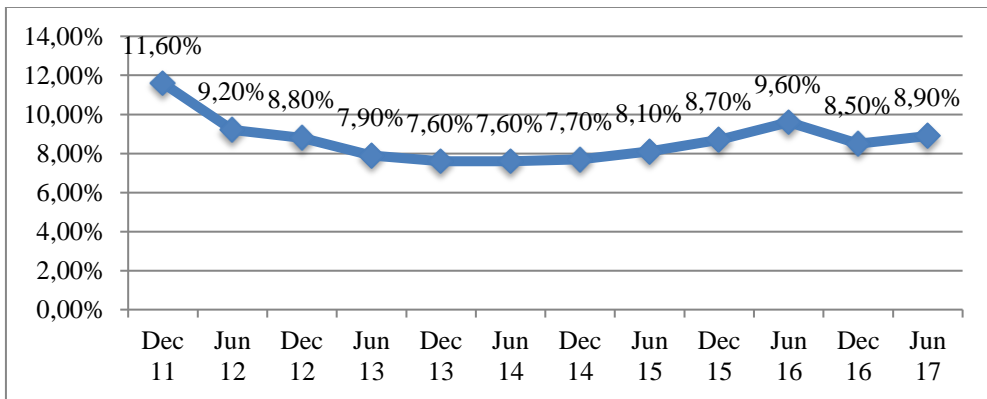
Auction date	Maturity (year)	Volume of emission	Average weighted rate	Amount received in the budget	Discount / Premium
11.01.2017	1	20,000,000	6.968	19,328,442	671,558
08.02.2017	1	20,000,000	7.040	19,321,785	678,215
07.03.2017	1	20,000,000	7.128	19,313,599	686,401
12.04.2017	1	20,000,000	6.971	19,328,41	671,859
10.05.2017	1	20,000,000	7.143	19,312,158	687,842
14.06.2017	1	20,000,000	7.167	19,309,937	690,063
		<b>120,000,000</b>	<b>7.1</b>	<b>115,914,062</b>	
04.01.2017	1	40,000,000	7.510	37,212,971	2,787,029
18.01.2017	1	40,000,000	7.623	37,181,253	2,818,747
01.02.2017	1	40,000,000	7.735	37,135,641	2,864,359
01.03.2017	1	50,000,000	7.788	46,396,566	3,603,434
05.04.2017	1	45,000,000	7.654	41,808,821	3,191,179
03.05.2017	1	40,000,000	7.552	37,198,619	2,801,381
07.06.2017	1	50,000,000	7.447	46,543,421	3,456,579
21.06.2017	1	50,000,000	7.383	46,570,952	3,429,048
		<b>220,000,000</b>	<b>7.6</b>	<b>330,048,244</b>	
11.01.2017	2	40,000,000	8.171	39,966,527	33,473
08.02.2017	2	40,000,000	8.210	40,187,789	187,789
07.03.2017	2	30,000,000	8.253	30,307,673	307,673
12.04.2017	2	40,000,000	7.995	40,003,633	3,633
10.05.2017	2	30,000,000	7.970	30,196,580	196,580
14.06.2017	2	40,000,000	7.739	40,718,551	718,551
		<b>220,000,000</b>	<b>8.1</b>	<b>221,380,753</b>	
25.01.2017	5	20,000,000	8.938	19,411,675	588,325
22.02.2017	5	20,000,000	9.181	19,366,700	633,300
29.03.2017	5	20,000,000	9.065	20,07,449	47,449
26.04.2017	5	25,000,000	8.638	25,652,272	652,272
31.05.2017	5	20,000,000	8.378	20,893,852	593,852
28.06.2017	5	20,000,000	8.228	21,143,680	1,143,680
		<b>125,000,000</b>	<b>8.7</b>	<b>126,515,627</b>	
15.02.2017	10	20,000,000	11.206	19,332,691	667,309
19.04.2017	10	20,000,000	9.973	20,988,873	988,873
		<b>40,000,000</b>	<b>10.6</b>	<b>40,321,564</b>	
		<b>860,000,000</b>	<b>7,940</b>	<b>834,18,250</b>	
			<b>(Average)</b>		

Source: www.mof.ge, Ministry of Finance of Georgia, (2017)

Since 2009 the regimen of monetary policy of the National Bank of Georgia implies inflation targeting. During this regimen targeted rate of inflation is determined in advance that is to be maintained in middle term period. Targeted rate of inflation is defined by the National Bank of Georgia and then approved by the Parliament of Georgia. Inflation targeting regimen is a relatively new practice and has been appeared quite successful in fight against inflation since the 90s. This regimen was introduced for the first time by the central bank of New Zealand in 1990 (Inflation targeting [online], 2018). Targeted rate of inflation in 2017 was 4%, but in 2018

it was 3%. With regard to real inflation in 2017, it amounted to 6.7%, which 67.5% shift from targeted rate, at the same time, as it is seen from table 2, average weighted interest rate on state securities was 7.940%, but taking into account inflation rate, then real profitability on the mentioned securities is respectively low  $-7,940-6,7=1,340$ . In respect of average weighted interest rate for treasury securities, for the last 6 years it has been revealed in the following way (Statistics of Internal Debt [online], 2017):

**Figure 2: Average Weighted Interest Rate for Treasury Securities**



Source: www.mof.ge, Ministry of Finance of Georgia, (2017)

As we've seen average weighted beneficial interest rate on state securities is relatively high, at the same time, while doing historic-comparative analysis, we can conclude that in 2012-2013 interest rate was declining, then it is increasing up to 2018, which is attractive for investors. But inflation rate is to be taken into account, which changes from targeted rate that makes an impact on real profitability of securities.

Unfortunately, we could not obtain information from the National Bank and the Ministry of Finance about what subjects participate in auction of state securities and what can be share volume of physical persons in purchase of state securities. This would give us a real picture about involvement and provision of information for population in alternative investment.

Like Georgia, Latvia uses state-owned securities as source of alternative investment from post-socialist and EU countries. The comparative analysis will give us an opportunity to reveal and evaluate the ways of perfection. Comparative analysis is based on variables and features, such as the types of state securities, the peculiarities of their release, realization and redemption, and diversification of attracted financial resources.

### 2.2.2 Latvia

First issuance of state securities in both Latvia and Georgia took place at the end of 1993. In the following years governmental financing was increasing and internal market of securities developed. Long-term securities were offered for investors. There are short-term treasury obligations from 6 to 12 months, midterm bonds-from 3 to 5 years and long-term bonds with the period of 10-11years. Emissions of securities in Latvia as well as Georgia are carried out by the Ministry of Georgia. Governmental securities of Latvia sells on the initial marker if securities. Auction date is announced in advance by the Treasury Service. There are two types of auctions:

Competitive multiple-price auction is organized by the Treasury Service at NASDAQ OMX Riga Stock Exchange. Auction takes place on Wednesdays and applications are received until 12:00.

Noncompetitive fixed rate is organized by the Treasury Service at NASDAQ OMX Riga Stock Exchange. Auction takes place on Wednesdays after receipt of applications at competitive auction until 3:00.

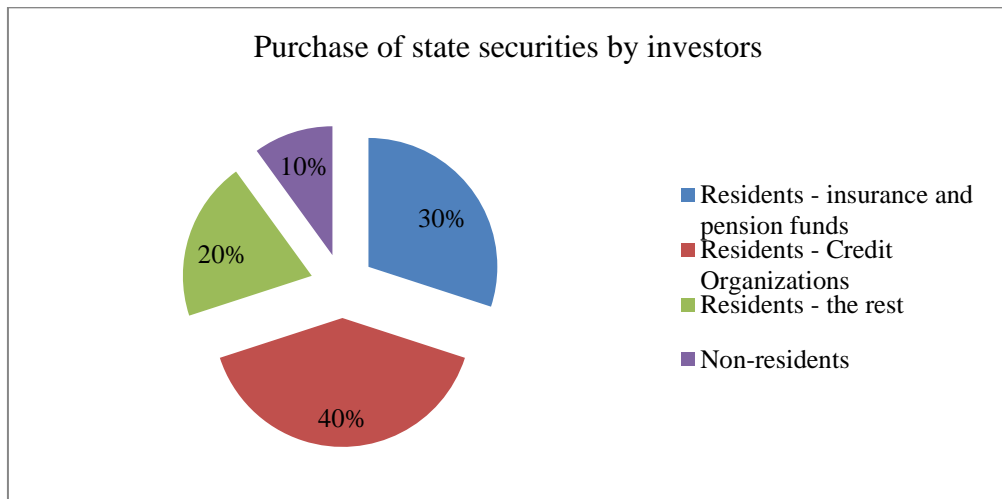
All state securities are registered in the Central Depositor of Latvia. Since 10<sup>th</sup> August 1999 state securities of Latvia, which are sold at initial market via auction, have been subject to registration in the official list of NASDAQ OMX Riga Stock Exchange. Physical persons and legal entities can participate in auction through dealers, which are commercial banks:

1. **ABLV Bank** (with regards to primary and secondary market issues);
2. **Citadelebanka** (with regards to primary and secondary market issues);
3. **DNB banka and DNB bankas** (DNB banka with regards to primary market issues and DNB bankas with regards to secondary market issues);
4. **SEB bankas** (with regards to primary and secondary market issues);
5. **Swedbank** (with regards to primary and secondary market issues).

Internal debt of the Central Government of Latvia is 1 506 million euro, external debt- 8 223 million euro (Government Domestic Securities [online], 2017).

The following types of investors participated in purchase of state securities at the second markets as of June 2017 (Central Government Debt Management [online], 2017):

**Figure 3: Purchase of State Securities by Investors**



Source: [www.kase.gov.lv](http://www.kase.gov.lv), Treasury Republic of Latvia (2017)

Since 19 June 2013 the Treasury service issued saving bonds for physical persons. The purpose for issuing saving bonds is to offer the population additional investment possibility and crediting of the government may be carried out that ensures economic growth. Distribution channel is online internet portal available for 24 hours, on any day of week. The internet portal is managed by the Central Depositor of Latvia. Any physical person having an account in any commercial bank of Latvia is able to purchase saving bonds via internet banking. Records on saving bonds for physical persons are kept to the Central Depositor that also make payments.

The main characteristics of saving bonds are:

- Validity period for saving bonds is 6 months, 12 months, 5 or 10 years.
- Coupon benefit- is fixed and determined by the Treasury Service that takes into accounts state obligations and profitability of bonds and other factors.
- Nominal value -1 euro.
- Minimal volume of investment -50euro.
- Maximum volume of investment -100 000 euro.
- Second market-not exist
- Early redemption-is possible at any time with nominal value, but penalty is also used.

Based on the experience of other countries, the Treasury service of Latvia aims that participation of physical persons in state debt volume in the form of saving bonds may achieve 2% in middle-term period (from 3-to 5 years). Emission of saving bonds ensures diversification of debt of central government and enhances conservative segment with regard to internal investors (Savings bonds [online], 2017)

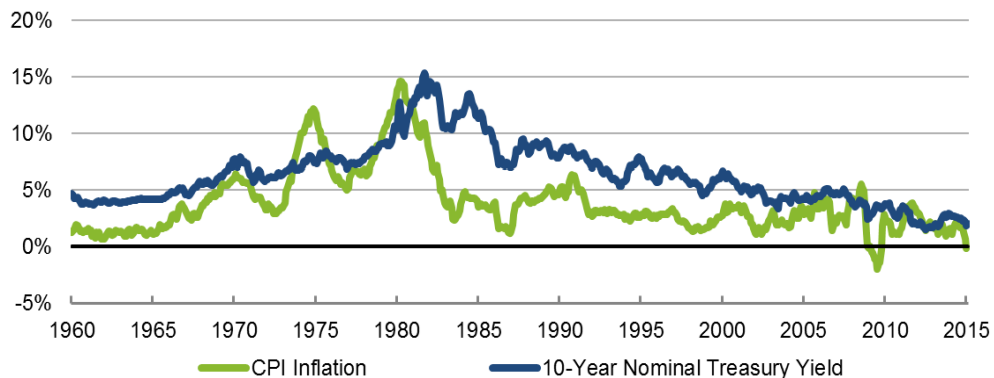
### 2.3 Specific Character of Formation of Interest Rate in Different Countries

The study proves that interest rates in various countries on short-term and long-term securities are low. The USA can borrow some amount within 2% for 10 years, but in case of 30-year bonds –approximately within 2.5%. Interest rate in other industrial countries is much lower. For instance, in Germany interest rate on 10-year state bonds amounts to 0.2%, in Japan-0.3% and Great Britain-1.6%.

Low interest rate –it is a part of not short-term, but long-term tendency. As drawing 1 reveals, profitability in US 10-year bonds in 1960 was low, but in 1981 it increased to maximum and achieved 15% and after that it has continued declining. This regularity is somehow explained by increase and decrease of inflation. In other equal conditions, investors require high profitability, when inflation is high to compensate with purchase power of dollar. Nowadays, incomes received from bonds are not protected from inflation. Real or corrected interest rate on 5-year US bonds amounts to inflation rate minus 0.1% (Bernanke, 2015).

**Figure 4: Interest Rate on 10-Year Bonds and Inflation in The USA**

Interest Rates and Inflation



Source: [www.brookings.edu](http://www.brookings.edu), Federal Reserve Board, BLS, Bernanke Ben, (2015)

In order to understand why interest rates are so low, it is important to use the conception called balanced real interest rate (frequently called Wicksellian interest rate). Balanced interest rate is a real rate, which envisages work force and volume of capital resources and its correction is possible after a while. Many factors have impact on balanced rate, which may be changed in time. In rapidly grown dynamic economy, it is expected that balanced interest rate will be high, in other equal conditions, as the expectation exist that it will be high perspective on return of investment. But in slowly grown or recession economy (for example Georgia and post-soviet countries), presumably balanced interest rate will be low, as investment possibilities are low or unfavorable. State costs and tax policy also has an effect on balanced interest rate. Big deficits increase balanced interest rate, as loans received by the government make economy be away from private investments. If the Federal Reserve System (FRS) wants to analyze the volume of capital market and working resources, the task will be to use its power to establish such level of interest rates that comes closer balanced rate. If FRS establishes higher market interest rate than balanced rate is, then growth of economy declines (it is possible to have recession), capital investments will not be attractive. FRS established such rates that do not cover expected potential profitability of investors.

If FRS tries to establish low interest rates compared to balanced rate, economy starts “overheating” causing inflation-unfavorable and instable situation. Therefore, it is important to define that a country’s economy and not FRS determined real interest rate, which may be taken by savers and investors. FRS can have certain influence on market rates, but not indefinitely.

### **3. Problem Solution**

In case of Georgia source for alternative investments is to be considered investments in state securities and not in Hedge Funds, in immovable property and goods, because it gives investors equal possibilities for optimal investment. At the same time, it should be mentioned that only one stock exchange is operating in Georgia and commercial banks take leading positions with regard to volume of deals made there that by it impedes development of this market.

Georgia, based on association agreement with the European Union, takes the obligation to develop capital market, which is to be closer to stock exchanges of the countries of the European Union. One of the reasons for emission of state securities is to develop capital market, but simultaneously, it should be a market with equal opportunities for any interested investors. According to the applicable provision, which regulates purchase and reporting rules of state securities, we cannot meet state securities that will be oriented on resources attracted by physical persons.

The forecasting becomes impossible as the state bodies do not provide information on the volume of state securities according to types of investors and their supervision analysis. It would be better if the Ministry of Finance and the National Bank write in their quarterly reports classification of investors purchasing securities according to physical persons and legal entities. Elaboration-assessment of those data will give the possibility to make conclusions on sharing experience of the European Union with regard to physical persons (example of Latvia) that would enable diversification of state internal debt.

For developing countries it is characteristic high level of interest rate on state securities, and Georgia in not exclusion. For the last 7 years minimum interest rate has not been less than 7.5%. However, inflation expectations should be taken into account, which really decline profitability range. Inflation targeting regimen is in Georgia, by which inflation rate of current year is defined in advance. But historic statistical dynamics gives the possibility to see that significant shift for targeting rate takes place, which increases risk for investments. The way

to solve this problem is insure profitability to be expected from state securities in case of shift of targeting rate.

#### 4. Conclusion

We have established legislative shortcomings that impede the functioning and development of the capital market. It is also proposed to introduce different types of government securities, Which includes EU member country with a similar productive and territorial scale such as a Georgia. It is also proposed to adjust the current state securities revenue by different methods that will give an additional stimulus to the business entity for the purchase of such securities and will facilitate the development of alternative investment markets, as investor's inflation risk will be cleared.

#### References

- [1] Bernanke, B.S. (2015). *Why are interest rates so low?* [online]. [cit.2015-03-30]. Available at: <https://www.brookings.edu/blog/ben-bernanke/2015/03/30/why-are-interest-rates-so-low/>
- [2] CAIA Association, Anson, M.J.P., Chambers, D.R., Black, K.H. and Kazemi, H. (2012). *CAIA Level I: An Introduction to Core Topics in Alternative Investments*, John Wiley & Sons, Business & Economics - 896 pages [online]. [cit.2018-02-27]. Available at: [https://books.google.ge/books?id=IyUXEeUUFOIC&pg=PT3&lr=&source=gbs\\_selected\\_pages&cad=2#v=onepage&q&f=false](https://books.google.ge/books?id=IyUXEeUUFOIC&pg=PT3&lr=&source=gbs_selected_pages&cad=2#v=onepage&q&f=false) .
- [3] Treasury Republic of Latvia (2017). *Central Government Debt Management (Q2). Statistics* [online]. [cit.2018-02-27]. Available at: [https://www.kase.gov.lv/sites/default/files/public/SSD/P%C4%81rskati/Ceturk%C5%A1%C5%86a%20bi%C4%BCetens/2017/Quarterly%20bulletin\\_Q2\\_2017.pdf](https://www.kase.gov.lv/sites/default/files/public/SSD/P%C4%81rskati/Ceturk%C5%A1%C5%86a%20bi%C4%BCetens/2017/Quarterly%20bulletin_Q2_2017.pdf).
- [4] Gaurav, S.A. and Kaiser, H.M. (2003). Hedge Fund Performance 1990–2000: Do the “Money Machines” Really Add Value? *Journal of Financial and Quantitative Analysis*, vol.38, iss. 2.
- [5] Treasury Republic of Latvia (2017). *Government Domestic Securities. Statistics* [online]. [cit.2018-02-27]. Available at: <https://www.kase.gov.lv/index.php/en/debt-management/government-domestic-securities>.
- [6] National Bank of Georgia (2018). *Government Securities. Statistics* [online]. [cit.2018-02-27]. Available at: <https://www.nbg.gov.ge/index.php?m=611&lng=eng>.
- [7] National Service of Statistics of Georgia (2017). *Foreign Direct Investments (FDI) based on sectors. Statistics* [online]. [cit.2018-02-27]. Available at: [http://www.geostat.ge/index.php?action=page&p\\_id=2231&lng=eng](http://www.geostat.ge/index.php?action=page&p_id=2231&lng=eng) .
- [8] National Bank of Georgia (2018). *Inflation targeting* [online]. Available at: <https://www.nbg.gov.ge/index.php?m=538&lng=eng>
- [9] Kendall, M. (2016). *Investing in Sustainable Agriculture, An analysis of federal funding for agroecological research shows tremendous untapped potential* [online]. [cit.2016-07-07]. Available at:



<https://www.elsevier.com/atlas/story/resources/investing-in-sustainable-agriculture> .

- [10] Provision (2015). *Provision of the ministry of finance on emission, circulation, reporting and coverage of treasury obligations, treasury bonds (in Georgian)* [online]. [cit.2015-01-26]. Available at: [https://www.nbg.gov.ge/uploads/legalacts/monetarypolicy/2014/2015/mofnbg\\_reg\\_on\\_treasury\\_securities7\\_\\_20150126\\_geo\\_codyfied.pdf](https://www.nbg.gov.ge/uploads/legalacts/monetarypolicy/2014/2015/mofnbg_reg_on_treasury_securities7__20150126_geo_codyfied.pdf)
- [11] Treasury Republic of Latvia (2017). *Savings bonds. Statistics* [online]. [cit.2017-11-24]. Available at: <https://www.kase.gov.lv/index.php/en/debt-management/savings-bonds>
- [12] Ministry of Finance of Georgia (2017). *State Securities Emissions. Public Debt of Georgia Statistical Buletin N8. Statistics* [online]. [cit.2018-02-27]. Available at: [http://mof.ge/images/File/debt-bulletin/Public-Sector-Debt-Statistical-Bulletin-N8\\_ENG.pdf](http://mof.ge/images/File/debt-bulletin/Public-Sector-Debt-Statistical-Bulletin-N8_ENG.pdf)
- [13] Ministry of Finance of Georgia (2017). *Statistics of Internal Debt. Public Debt of Georgia Statistical Buletin N8* [online]. [cit.2018-02-27]. Available at: [http://mof.ge/images/File/debt-bulletin/Public-Sector-Debt-Statistical-Bulletin-N8\\_ENG.pdf](http://mof.ge/images/File/debt-bulletin/Public-Sector-Debt-Statistical-Bulletin-N8_ENG.pdf)
- [14] Suchkova, N.A. and Zhitnikova, E.A. (2012). *Alteranative Investment: Wine Market* (Сучкова Н.А.и Житникова, Е.А.(2012). *Анализ возможностей современного рынка альтернативных инвестиции in Russian*) [online]. [cit.2018-02-27]. Available at: [http://orelgiet.ru/docs/23\\_11\\_10\\_12.pdf](http://orelgiet.ru/docs/23_11_10_12.pdf)
- [15] Terhaar, K., Staub, R. and Singer, B. (2003). *Appropriate Policy Allocation for Alternative Investments, Journal of Portfolio Management ISSN:0095-4918* [online]. [cit.2018-02-27]. Available at: <http://www.grbestpractices.org/sites/grbestpractices.org/files/Appropriate%20Policy%20Allocation%20for%20Alternative%20Investments.pdf>

## **Balassa-Samuelson Effect in 10 CEE Countries: Does Productivity Influence their Price Convergence to EU15?**

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### **Abstract**

*This paper deals with Balassa-Samuelson (BS) effect in Central and East European (CEE) countries. This theory claims that higher growth of productivity in tradable sector leads to growth of prices in non-tradable one. Lately, we can see price convergence between former members of European Union (EU15) and new members of European Union (CEE countries). BS effect is one of possible explanations of this fact. The aim of this paper is to estimate this effect in 10 CEE countries. We try to investigate whether growth of productivity in CEE countries leads to their price convergence to EU15 or not. We use OLS regression in 1995Q2-2017Q1 periods. We find out that BS effect is important in most of CEE countries. Unlike other studies, some traditional assumptions of this theory are tested in this one. We find out that (i) PPP theory is not valid in CEE countries and that (ii) wages in tradable and non-tradeable sectors tend to be equalized. Therefore, the estimated model is corrected according to these conditions.*

**Keywords:** *Balassa-Samuelson effect, catching up effect, CEE countries, economic convergence, European Union*

**JEL Classification:** *C22, E31, P20*

### **1. Introduction**

It can be seen that countries with lower initial output per capita reach lower price level. On the other hand, inflation rates of these countries grow faster compared to developed countries. In this case, we speak about convergence of price levels. The Balassa-Samuelson (BS) effect is one of the popular explanations of price level convergence.

BS effect was formally described in the 1960s (Balassa, 1964 and Samuelson, 1964). The theory has become popular again in the 1990s. A lot of Central East European (CEE) countries switched from central planning to market economy and they started to negotiate about membership in common monetary union. Although the convergence process of these countries has become, the differences in the price level can be seen even today. Countries joining common monetary union must fit Maastricht convergence criteria. One of them says that inflation rate shall not exceed inflation rates in the 3 EU member states with the lowest inflation plus 1.5 percentage points. On the other hand, another criterion says that country should not have devalued the central rate of their euro-pegged currency during at least two years before joining monetary union. The idea that changes in productivity can affect inflation rate had not been accounted for while these criteria were designed. In the case that BS theory was valid, the countries, which have to maintain both price stability and currency stability, would have problems to fulfil (at least) one of these criteria. Many empirical papers were

written about BS effect in CEE countries in from 1999 to 2005 (see part 1.1). The interest of this theory fell down after most of CEE countries joined European Union (EU) in 2004. We can find few empirical papers written in last 10 years.

The aim of this paper is to assess the role of BS effect in 10 CEE countries. Moreover, the theory of BS effect is based on some (relatively strong) assumptions. In this paper, we try to investigate whether these assumptions are valid or not. Particularly, we test (i) whether Purchasing Power Parity (PPP) theory is valid for tradable sector or not and (ii) whether wages tend to be equalized across tradable and non-tradable sector or not.

### ***1.1 Review of Empirical Literature***

In this paper, we try to estimate role of BS effect in some CEE countries. There are a numerous empirical papers, which deals with BS effect in CEE countries. Most of them are papers from the late 90s and early 2000s and they usually claim that BS effect is one of the major determinants of inflation in these countries (see the surveys by Breuss, 2003 and Blaszkiewicz et al., 2004). Halpern and Wyplosz (2001) provide direct estimates of BS effect for all the transition economies for the period 1991 to 1999. They estimate that BS effect contribute 3 percentage point to inflation every year. Lojschova (2003) tries to measure BS effect in the Czech Republic, Slovakia, Poland and Hungary. Unlike previous studies, she tries to relax some assumptions of BS model (the validity of PPP theory and homogenous and completely mobile labour). She finds strong evidence of BS effect in these countries in most of models. Egert (2002) deals with BS effect in the Czech Republic, Hungary, Poland, Slovakia and Slovenia in 1991:Q1 - 2001:Q2 periods. He also confirms that BS effect is significant in these countries. On the other hand, he claims that the size of BS effect does not endanger the fulfilment of the Maastricht inflation criteria. Based on these papers, the contribution of BS effect to inflation rate of these countries varies about 2-3 % per year. On the other hand, there are papers such as Mihaljek and Klau (2004) or Egert (2005) that find lower or even zero contribution of BS. Meanwhile in the late 90s and early 2000s BS effect was discussed a lot in the case of CEE countries, there is no such a big interest in it today. Miletic (2012) deals with BS effect in nine CEE countries in 1997-2010 periods. She finds that BS effect is stronger in economies with a stronger convergence process (but it is less than 1.5 percent in average). Konopczak (2013) investigates BS effect in the Czech Republic, Slovakia, Poland and Hungary. She claims that the catching-up driven inflationary pressure is a non-negligible issue in the context of the CEE countries. Mihaljek and Klau (2008) test domestic and international BS effect in 11 CEE countries. They find that BS effect significantly increases the inflation rate in these countries compared to euro area, which can influence the fulfilment of Maastricht criteria (especially in the case of Hungary, Lithuania, Slovakia and Slovenia).

## **2. Problem Formulation and Methodology**

We provide mathematical formulation of BS effect in the first part of this Section. The second part is focused on data description.

### ***2.1 Model***

Traditional model (labelled as Baseline model in this paper) is described in the first part of this section. This model is based on some (relatively strong) presumptions (described below). There is serious discussion whether these assumptions are valid (especially in the case of CEE countries) or not. Nevertheless, most empirical studies neglect this discussion and simply

presume that these presumptions are valid. In this paper, we provide empirical evidence of validity of these conditions in the second part of this section. Our Adjusted model is therefore constructed according to the results of econometric tests and it is introduced in the last part of this section.

### 2.1.1 Baseline Model

While computing BS effect, at first, the price levels ( $P$ )<sup>1</sup> are decomposed into traded ( $P^T$ ) and non-traded ( $P^N$ ) components in domestic and foreign (\*) countries:

$$p_t = \alpha p_t^T + (1 - \alpha) p_t^N, \quad (1)$$

$$p_t^* = \alpha^* p_t^{T*} + (1 - \alpha^*) p_t^{N*}, \quad (2)$$

where  $t$  denotes time and parameter  $\alpha$  is a share of traded components in consumption basket. The real exchange rate ( $q$ ) can be expressed as the relative price of goods produced abroad to those produced in domestic country:

$$q_t = (e_t + p_t^*) - p_t, \quad (3)$$

where  $e$  stands for nominal exchange rate. By substituting equations (1) and (2) into (3), the changes of real exchange can be written as:

$$\Delta q_t = (\Delta e_t + \Delta p_t^{T*} - \Delta p_t^T) + [(1 - \alpha^*)(\Delta p_t^{N*} - \Delta p_t^{T*}) - (1 - \alpha)(\Delta p_t^N - \Delta p_t^T)], \quad (4)$$

PPP claims that prices of tradable goods can be expressed as:

$$\Delta p_t^T = \Delta e_t + \Delta p_t^{T*}, \quad (5)$$

If it was true, the first term on the right side of equation (4) would disappear:

$$\Delta q_t = (1 - \alpha^*)(\Delta p_t^{N*} - \Delta p_t^{T*}) - (1 - \alpha)(\Delta p_t^N - \Delta p_t^T). \quad (6)$$

Using Cobb-Douglas production function, it can be proved (see Lojschova, 2003 or Mihaljek and Klau, 2004) that ratio of non-tradable to tradable prices ( $p^{N/T}$ ) can be written as:

$$p^{N/T} = p_t^N - p_t^T = c + (a_t^T - a_t^N), \quad (7)$$

where  $a$  represents productivity and  $c$  denotes constant including interest rates and factor intensities.

By substituting equation (7) into equation (4), we can estimate BS effect in particular country ( $D$ ) compared to euro area ( $EA$ ) as:

$$(\Delta p^D - \Delta p^{EA})_t = \beta_1 \Delta e_t^D + \beta_2 [(1 - \alpha^D)(\Delta a_T^D - \Delta a_N^D)_t - (1 - \alpha^{EA})(\Delta a_T^{EA} - \Delta a_N^{EA})_t] + \varepsilon_t. \quad (8)$$

Throughout this paper, the second term in the right side of equation (8) related to coefficient  $\beta_2$  is labelled as  $bs_{it}$ . Equation (8) represents the Baseline model in this paper. This

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<sup>1</sup> Lower-case letters represents logarithm forms throughout this paper.

specification of BS effect is the most common in other papers. There are two (relatively strong) assumptions in this model:

1. PPP theory is valid for tradable sector,
2. Wages tend to be equalized across tradable and non-tradable sector within country.

If (1.) PPP theory was not valid (equation (5) does not hold), the estimated model should be written as:

$$(\Delta p^D - \Delta p^{EA})_t = \beta_1(\Delta p_T^D - \Delta p_T^{EA})_t + \beta_2[(1 - \alpha^D)(\Delta a_T^D - \Delta a_N^D)_t - (1 - \alpha^{EA})(\Delta a_T^{EA} - \Delta a_N^{EA})_t] + \varepsilon_t \quad (9)$$

If (2.) wages ( $w$ ) do not tend to be equalized across tradable and non-tradable sector within country, the additional term:

$$\beta_3[(1 - \alpha^{EA})(\Delta w_T^{EA} - \Delta w_N^{EA})_t - (1 - \alpha^D)(\Delta w_T^D - \Delta w_N^D)_t] \quad (10)$$

should be added into equation (8) or (9), see Lojschova (2003) for mathematical proof.

### 2.1.2 Testing of assumptions of the theory

#### Validity of PPP theory

Acaravci and Ozturk (2010) or Égert (2005) claim, that if PPP theory was valid, the development of real exchange rate would be stationary. Therefore, we use ADF and PP test on real exchange rate data to assess whether this assumption is valid or not. The real exchange rate is given by equation (3). There are a few possibilities, which price index can be used to compute it (see Driver and Westaway, 2005 for detail discussion). In this paper, we use PPI in manufacturing (which corresponds with our definition of tradable sector the most). Then, we use ADF and PP tests to test stationarity of real exchange rate. The null hypothesis of both tests is that there is a unit root in time series. If the null hypothesis cannot be rejected, we claim that PPP theory is not valid in particular country.

#### Validity of wage equalization

Égert (2005) claims, that if wages tend to be equalized across tradable and non-tradable sector, the development of their ratio should be stationary. Therefore, we computed variable wages ratio ( $W$ ) as ratio of wages in tradable sector ( $W^T$ ) and wages in non-tradable sector ( $W^N$ ). Once again, we use ADF and PP tests to assess whether there is a unit root in time series or not. If there is a unit root (time series is not stationary) the assumption of wage equalization is not valid.

## 2.2 Data

Ten CEE countries (Bulgaria, the Czech Republic, Estonia, Croatia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia) are included into the sample. All of these former socialists countries are new members of EU (Romania is not included in because of lack of available data). All models are estimated rather as an individual time series than a panel to capture individual country effects. Data description, frequency and sources are depicted in Table 1.

There are serious discussions about assessing which economy activity should be considered as tradable and non-tradable (see Tica and Druzic, 2006, who provide survey of empirical papers). This paper uses manufacturing as approximation of tradable sector and the rest of economic activities as an approximation of non-tradable sector.

All models are estimated using OLS with heteroscedasticity consistent estimator to avoid problems with heteroscedasticity and autocorrelation. Quarterly data covers 1995Q2–2017Q1 periods. All variables used in the model in Section 3.2 were tested for stationarity using ADF test. There is no unit root in any of the variables on better than 0.01 significance level. Eviews 7 software was used for all calculations.

**Table 1: Data Description**

Variable	Description	Frequency	Source
$A$	Productivity computed as $VA/EMP$	Quarterly	-
$\alpha$	Ratio of tradable to non-tradable sector (measured as their value added)	Quarterly	Eurostat (2017a)
$E$	Nominal (bilateral) exchange rate Country currency/EUR	Monthly	Eurostat (2017b)
$EMP$	Thousands of Hours worked, seasonally and calendar adjusted	Quarterly	Eurostat (2017)
$P^N$	Prices (GDP deflator) in non-tradable sector (rest of economic activities)	Quarterly	Eurostat (2017a)
$PPI$	Producers Price Index in manufacturing	Monthly	Eurostat (2017c)
$P^T$	Prices (GDP deflator) in tradable sector (manufacturing)	Quarterly	Eurostat (2017a)
$VA$	Value added in particular sector, constant prices, seasonally and calendar adjusted	Quarterly	Eurostat (2017a)
$WAGES$	Ratio of wages in tradable to non-tradable sector	Quarterly	-
$WAGES^T$	Wages in non-tradable sector	Quarterly	Eurostat (2017b)
$WAGES^N$	Wages in tradable sector	Quarterly	Eurostat (2017b)

### 3. Problem Solution

This section is divided into two parts. We test the assumptions of BS theory in the first of them. Then, we modify our model based on the results in the first part and estimate it.

#### 3.1 Results of Presumption Testing

As it was mentioned, the development of real exchange rate is computed by equation (3). The results of ADF and PP tests are depicted in Table 2. It is obvious that null hypothesis can be rejected (on 5% probability level) only in the case of Slovakia and Hungary. In Slovakia, nevertheless, time series is too short to provide significant results. Therefore, we claim, that PPP theory is not valid in CEE countries.

Results of both ADF and PP tests of variable wages ratio ( $W$ ) are shown in Table 2. We can reject null hypothesis of both tests in most countries (the Czech Republic, Estonia, Latvia, Poland and Slovakia on 1% and Hungary on 10 % probability level). In the case of Lithuania, we can reject null hypothesis using PP test. From the development of wages ratio, we can see, that results are influenced by the value in 2009Q1. If we do not take this observation into account, we can reject null hypothesis by both ADF and PP test on 1% probability level. Similarly, we can reject null hypothesis in the case of Croatia, when the first year (2003) is not included in. Therefore, only country, where we cannot reject null hypothesis is Slovenia. On the other hand, time series in Slovenia is stationary in 1995 to 2007 periods. Generally, we can say that development of time series of wages ratio is stationary in CEE countries and we can presume that wages tend to be equalized across tradable and non-tradable sectors.

**Table 2: Results of Presumptions Testing**

Country	Observations		ADF p-value		PP p-value	
	PPP	WAGES	PPP	WAGES	PPP	WAGES
<b>Bulgaria</b>	210	X	0.880	x	0.897	x
<b>Czech Republic</b>	210	88	0.389	<0.001	0.551	<0.001
<b>Estonia</b>	107	87	0.387	0.008	0.344	<0.001
<b>Croatia</b>	209	54	0.510	0.390	0.377	0.001
<b>Latvia</b>	167	78	0.711	<0.001	0.730	0.004
<b>Lithuania</b>	178	86	0.127	0.128	0.484	<0.001
<b>Hungary</b>	210	82	0.003	0.053	0.007	0.099
<b>Poland</b>	210	59	0.100	<0.001	0.100	<0.001
<b>Slovenia</b>	83	88	0.812	0.734	0.812	0.886
<b>Slovakia</b>	71	87	0.016	0.010	0.013	<0.001

Source: own calculations

### 3.1 Estimate of Adjusted Model

It was found out that (i) PPP theory is not valid for tradable sector and (ii) wages tend to be equalized across tradable and non-tradable sector within country. Based on these facts, we should estimate BS effect using equation (9) in the case of CEE countries. According to Mihaljek and Klau (2008) we added lagged dependent variable into our model as well to capture persistence in inflation differential. The results are depicted in Table 3. Time series are not same long due to lack of observations in some countries. The first observation is depicted in the second column of the Table 3. The last observation is 2017Q1 in all countries. We can see that lagged depended variable is significant in most cases form the third column of Table 3. We use it even in those cases, where it is not significant in order to measure persistence in inflation rate differentials during time and in order to have comparable results for all countries. We expected that coefficients related to Prices of tradable goods would be positive and significant. We prove this presumption in all countries (see fourth column of Table 3). The key variable – Contribution of productivity growth – is depicted in the fifth column of the Table 3. It is obvious that it is statistically significant with 1% probability in eight out of the

ten states. It is statistically significant with 10% probability in the case of Croatia. Nevertheless, there is no statistical significance in the case of Estonia. It is important to realise that if we want to compute BS effect, the values of the coefficients should be multiplied by original average productivity (the sixth column of Table 3). Therefore, average BS effect in each quarter is computed in the last column of the Table 3. It can be seen that BS effect is the strongest in Poland, Slovakia and Slovenia. BS effect is strong and significant also in other CEE countries (Bulgaria, Czech Republic, Lithuania and Hungary). A special situation can be seen in the case of Latvia. It is the only country, where the productivity growth was smaller than in the euro area<sup>2</sup>. As concerns Croatia, we can see that BS effect is only around 0.07 p.p. of inflation differential. Nevertheless, this value is statistically significant and therefore Estonia is the only country with no evidence of BS effect.

**Table 3: Estimation of BS Effect in CEE Countries in 1995 to 2017 Periods**

Country	First obs.	Lagged dependent variable $p_i^{D/EA}_{t-1}$		Prices of tradable goods $pt_i^{D/EA}_t$		Contribution of productivity growth $bs_{it}$		Average growth of productivity <sup>1</sup>	BS effect <sup>2</sup>
<b>Bulgaria</b>	2001Q2	-0.323	***	0.259	***	0.175	***	1.626	0.285
<b>Czech. rep</b>	1996Q2	0.067		0.315	***	0.203	***	2.394	0.486
<b>Estonia</b>	2000Q2	-0.551	***	0.366	***	0.046		0.911	0.042
<b>Croatia</b>	2000Q2	-0.187	**	0.434	***	0.108	*	0.641	0.069
<b>Latvia</b>	1995Q2	-0.227	**	0.473	***	0.469	***	-0.659	-0.309
<b>Lithuania</b>	1995Q2	-0.191	*	0.629	***	0.434	***	1.520	0.660
<b>Hungary</b>	1995Q2	0.058		0.563	***	0.351	***	1.410	0.495
<b>Poland</b>	2002Q2	-0.306	***	0.249	***	0.303	***	2.632	0.797
<b>Slovenia</b>	1995Q2	0.023		0.605	***	0.417	***	1.738	0.725
<b>Slovakia</b>	1995Q2	-0.297	***	0.211	***	0.253	***	2.943	0.745

<sup>1</sup> Average growth of productivity is computed from equation  $(1 - \alpha^D)(\Delta a_T^D - \Delta a_N^D)_t - (1 - \alpha^{EA})(\Delta a_T^{EA} - \Delta a_N^{EA})_t$  for each country ( $D$ ) in given period. <sup>2</sup> BS effect is computed as a contribution of productivity growth multiplied by average growth of productivity. \*\*\*, \*\*, \* denotes 1%, 5% and 10% probability level. All models are estimated using heteroscedasticity consistent estimator.

Source: own calculations

#### 4. Conclusion

In this paper, we try to estimate BS effect in 10 CEE countries. Unlike other papers, we test two traditional assumptions of BS theory – the validity of PPP theory and wage equalization in both sectors. It was found that PPP theory is not valid and wages tend to be equalized across sectors in CEE countries. Therefore, we estimate adjusted model according to these conditions.

<sup>2</sup> See negative value in the sixth column of Table 3, note that negative values of this variable does not necessarily mean that productivity growth was negative, it only means that the growth of productivity was smaller than in the euro area



We found that BS effect is important in most CEE countries. We found the strongest BS effect in Poland, Slovenia and Slovakia.

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### **References**

- [1] Acaravci, A. and Ozturk, I. (2010). Testing purchasing power parity in transition countries: evidence from structural breaks. *Amfiteatru Economic Journal*, vol. 12, no. 27, pp. 190-198.
- [2] Balassa, B. (1964). The purchasing-power parity doctrine: a reappraisal. *Journal of political Economy*, vol. 72, no. 6, pp. 584-596.
- [3] Blaszkiewicz, M., Kowalski, P., Rawdanowicz, L. and Wozniak, P. (2004). Harrod-Balassa-Samuelson effect in selected countries of central and eastern europe. *CASE Network Reports No. 57*.
- [4] Breuss, F. (2003). Balassa-Samuelson effects in the CEEC. Are they obstacles for joining the EMU? *EI Working Papers / Europainstitut*, 52. Forschungsinstitut für Europafragen, WU Vienna University of Economics and Business, Vienna.
- [5] Driver, R. and Westaway, P. F. (2005). Concepts of equilibrium exchange rates. *Bank of England Working Paper 247*, London.
- [6] Égert, B. (2002). Investigating the Balassa-Samuelson hypothesis in the transition: Do we understand what we see? A panel study. *Economics of Transition*, vol. 10, no. 2, pp. 273-309.
- [7] Égert, B. (2005). Balassa-Samuelson meets South Eastern Europe, the CIS and Turkey: A close encounter of the third kind? *William Davidson Institute Working Paper 796*.
- [8] EUROSTAT (2017). Employment A\*10 industry breakdowns. Eurostat [online], [cit.2017-12-22], Available at: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=namq\\_10\\_a10\\_e&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=namq_10_a10_e&lang=en)
- [9] EUROSTAT (2017a). Gross value added and income A\*10 industry breakdowns. Eurostat [online], [cit.2017-12-22], Available at: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=namq\\_10\\_a10&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=namq_10_a10&lang=en)
- [10] EUROSTAT (2017b). Euro/ECU exchange rates - monthly data. Eurostat [online], [cit.2017-12-22], Available at: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ert\\_bil\\_eur\\_m&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ert_bil_eur_m&lang=en)
- [11] EUROSTAT (2017c). Producer prices in industry, total - monthly data. Eurostat [online], [cit.2017-12-22], Available at: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=sts\\_inpp\\_m&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=sts_inpp_m&lang=en)

- [12] Halpern, L. and Wyplosz, C. (2001). Economic transformation and real exchange rates in the 2000s: the Balassa-Samuelson connection. *Economic Survey of Europe*, no. 1, pp. 227-239.
- [13] Konopczak, K. (2013). The Balassa-Samuelson effect and the channels of its absorption in the Central and Eastern European Countries. *National Bank of Poland Working Paper No. 163*.
- [14] Lojschova, A. (2003). Estimating the impact of the Balassa-Samuelson effect in transition economies. *IHS Economics Series 140*.
- [15] Mihaljek, D. and Klau, M. (2004). The Balassa-Samuelson effect in central Europe: a disaggregated analysis. *Comparative Economic Studies*, vol. 46, no. 1, pp. 63-94.
- [16] Mihaljek, D. and Klau, M. (2008). Catching-up and inflation in transition economies: the Balassa-Samuelson effect revisited. *BIS Working Paper No. 270*.
- [17] Miletić, M. (2012). Estimating the impact of the Balassa-Samuelson effect in central and eastern European countries: A revised analysis of panel data cointegration tests. *Panoeconomicus*, vol. 59, no. 4, pp. 475-499.
- [18] Samuelson, P. A. (1964). Theoretical Notes on Trade Problems. *Review of Economics and Statistics*, vol. 46, no. 2, pp. 145-154.
- [19] Tica, J. and Družić, I. (2006). The Harrod-Balassa-Samuelson effect: a survey of empirical evidence. *EFZG working paper series no. 07*, pp. 1-38.

## The Structure of Municipalities in the Countries of the European Union as a Key Factor in Regional Development

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### **Abstract**

*The structure of municipalities in regions represents a factor having impact on spatial development. Municipalities of different size usually offer different factors of localization and condition the localization of companies and population. Large municipalities with material (firms) and human capital concentrated and with a built-in infrastructure seem to be more attractive for firms, companies and for the population living in there. Large municipalities become the points of regional development and due to their link to small municipalities they are able to radiate initiating impulses into small municipalities or villages. Due to the area of Slovakia and the number of population, the country as a region in the European Union belongs to the number of rural countries with a structure of scattered municipalities. Based on the experience gained in EU countries the objective of the paper is to design settlements that can fulfill the function of the poles of development in the region.*

**Keywords:** *development pole, peripheral communities, rural settlements, settlement structure of the countries of the European Union, urban settlements*

**JEL Classification:** *O18, R12, R20, R21*

### **1. Introduction**

With Juan Infante-Amate, an Associate Professor at the University Pablo de Olavide in Spain who focuses his research on the environmental and rural history of the Mediterranean from the eighteenth century onwards it can be said that scattered settlements started to develop in the nineteenth century and that the reasons behind the expansion of scattered settlements are institutional and demographic changes. The dispersed, scattered settlements as a sub-type of rural settlement has historically been significant as an element of the landscape which has allowed territory to be managed and has created different architectural forms and complex social relationships. Also Nemeč and Imrovič (2017) are defending their view that other European countries have been dealing with the issue of the scattering structure of settlements and their links to public administration for a couple of decades. Transformation processes in the former Eastern bloc countries are closely related to the social-economic development that was initiated in the countries. According to Jeřábek, Čapošová (2016), the transformation processes resulting in the change of the system created not only new political, but mainly economic and administrative situations that have impact on development of settlements. Evaluating the development there is a need to consider the different base-point situations in long-term democratic conditions of West European countries and the operation of decentralized public administration. On the contrary, this problem is more complex in the states of the Eastern bloc, characterized by non-democratic and centralized system of control, as stated by Šramel (2017). Their preceding development was typical by forced and violent

integration, and by the consolidation of municipalities' network. According to Vrabková, Vaňková (2015), the aim was not the economic effectiveness of municipalities by services providing, but rather the centralization of political power. The transfer to democratic control system and the decentralization process of public administration can be evaluated as the transformation process with significant structural changes taking place since 1990's until present.

## **2. Problem Formulation and Methodology**

In the context of the research of consolidated and scattered local structures diverse criteria need to be considered. Confirming or rejecting the effect of consolidation is impossible. Economic results favour consolidated structures especially in countries with governments preferring functionality and competitiveness in favour of large municipalities not only in the country, but also in the European Union.

### **2.1 Problem Formulation**

Opinions of experts and politicians in developed European countries concur in the fact that consolidated settlement structure (formation of larger municipalities) is able to adopt greater range of rights and powers, and liabilities with adequate financial resources. Such opinion, mainly from politicians, does not apply completely in the states of Central and Eastern Europe (Nižňanský, 2009). Despite economic views prefer consolidation reforms of settlement structures, several sociological researches point out strong identification of municipalities' residents, although very small ones, with their settlement units, and preservation of scattered settlement structures (Swianiewicz, 2010).

If we looked at the 60 years development in the countries of Western Europe, we can see many countries, in which there is the tendency to prefer various integration and consolidation trends related with the relationship to the local settlement structure. Klimovský (2010) states that this is the long-term trend consisting of several relatively easily distinguishable phases, e.g. in Denmark, or the long-term continual process without clearly defined conclusion, e.g. in Netherlands.

Denmark is introduced in this matter as the exemplary case of the country, which has successfully implemented the consolidation reform. At the beginning of 1960's, approximately 80% of all Danish municipalities belonged to the size-category of municipalities with the population not reaching the number of 3000 inhabitants. Nowadays, only one municipality belongs to this category (Albæk et al., 1996).

Netherlands belongs to countries, where the consolidation reform takes place continually. In 1950, there were 1014 municipalities, which have gradually consolidated into 440 municipalities in 2009. During recent years, consolidated are municipalities, of which population does not reach the limit of 20 000 inhabitants (Klimovský, 2010; Smith, Kvaloy, Schefold, 2005).

According to Klimovský (2010), during recent years, we can see consolidation and integration reforms of settlement structure also in Central and Eastern Europe. In his publication, the author describes the process of consolidation reforms in the countries, such as Lithuania and Macedonia. Reforms results in Lithuania are compared to the most consolidated European countries; current population size of municipalities is on the level of approximately 60 000 inhabitants, and their number forms 60 municipalities. Interesting experience with the consolidation reform can be seen in Macedonia (Kreci, Ymeri, 2010). During the first

decentralization reform in 1995, the number of municipalities has increased on its territory from original 30 to current 123 municipalities. However, the position of such municipalities within the creation of public policies was rather weak, as stated by Horváth, Mikuš (2016). 10 years later, there was implemented the consolidation reform and subsequent decrease of municipalities number to 84. At the same time, we could see its competence strengthening and increasing of its autonomy in the area of income allocation.

## **2.2 Methodology**

The question of the settlement structure and its relation to public affairs administration is dealt by experts and politicians. Examples from many European countries and from countries outside Europe prove that consolidated settlement structure, or larger municipalities, are able to adopt greater range of rights and powers, and to ensure higher effectiveness of provided services and their performance. Universal determination of optimal size of the municipality does not exist, which can be seen on several European examples. Settlement structure depends on economic, political, geographical, and other conditions within the country.

The objective of the paper is to suggest settlements on the basis of selected countries of the European Union, which can have the function of development poles within the region, which could mean at least partial consolidation of scattered settlement structure of the region, on the model area of Trenčín region.

The Slovak Republic is divided into eight regions. The structure of settlements, municipalities in all regions is almost identical, consisting of many parts, no region is distinct from the others in its structure of settlements. Due to the fact, that processing the design of a consolidated structure for all regions is a time consuming process and is more suitable for a large paper, our attention is focused only on Trenčín self-governing region as an example of a structure. Results that have been gained can be applied to other regions as well.

Researched object was the settlement structure of Trenčín region in the period 1996 – 2017. The settlement structure was evaluated:

- through total number of settlements and their division on towns and villages;
- through relative representation of urban and rural settlements and permanently living inhabitants in urban and rural settlements;
- through the representation of municipalities and inhabitants living there according to following settlement sizes: up to 500 inhabitants, up to 2000, up to 5000, up to 20 000, up to 50 000, up to 100 000;
- through the division of municipalities from the point of view of their spatial organization and locational-functional characteristics, and possible administrative function, according to Christaller's method by the use of parametric analysis for the evaluation of municipalities of Slovakia by authors Bašovský, Švecová [2002] into 3 types of municipalities: peripheral municipalities, municipalities able to fulfill the function of development poles within the microregion, and municipalities as regional cores (urban settlements).

By processing of this problem, we have used the methods of scientific abstraction, analysis, synthesis, deduction, and the method of computer and cartographic processing.

### 3. Problem Solution

„The self-governing region of Trenčín is the result of the process of introduction of regions, which is connected or as the case may be is the result of transformation processes that started in 1989“, state Bočáková, Kubičková, (2015).

The settlement structure of Trenčín region was formed of 276 settlements, from which 18 had the character of urban settlement and 257 were considered as rural settlements (villages). Trenčín region settlement structure can be characterized as rural settlement.

**Table 1: Trenčín Region Settlement Structure**

Municipality type	Year 1996				Year 2017			
	Mun. no.	Mun. share (%)	Population	Population share (%)	Mun. no.	Mun. share (%)	Population	Population share (%)
<b>Towns</b>	18	6.55	356 003	58.35	18	6.52	341 847	56.9
<b>Villages</b>	257	93.45	254 132	41.65	258	93.48	257 984	43.1
<b>Total</b>	275	100	610 135	100	276	100	599 831	100

Source: ŠÚ SR, Regional database, Author's calculations

In the course of the monitored period, the settlement structure has not changed. Size structure of Trenčín region municipalities was more favorable in the relationship to the development, than in Slovakia as a whole, because Trenčín region had higher settlement density. Small villages up to 500 inhabitants had the share of 30% in the settlement structure, and there lived only 4.5% of regional population.

**Table 2: Size Structure of Trenčín Region Municipalities According to the Population**

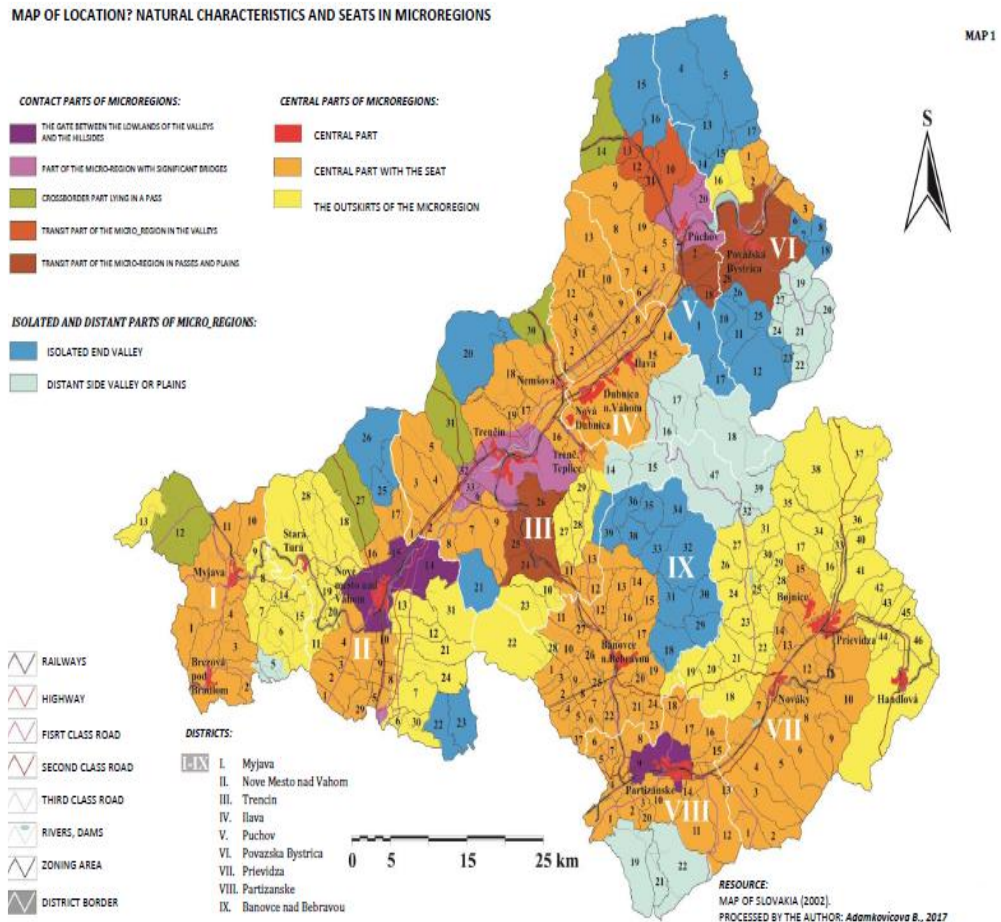
Municipalities' size structure	Year 1996				Year 2017			
	Mun. no.	Mun. share (%)	Population	Population share (%)	Mun. no.	Mun. share (%)	Population	Population share (%)
<b>50000-100000</b>	2	0.73	113 434	18.59	2	0.72	107 678	18.06
<b>20 000-50 000</b>	5	1.82	137 669	22.56	5	1.81	123 641	20.93
<b>5000-20 000</b>	10	3.64	102 010	16.72	9	3.26	93 947	15.9
<b>2000-5 000</b>	28	10.18	83 034	13.61	29	10.51	93 014	15.74
<b>500-2 000</b>	147	53.45	148 349	24.31	149	53.99	145 709	24.66
<b>less than 500</b>	83	30.18	25 639	4.2	82	29.71	26 834	4.54
<b>Total</b>	275	100	610 135	100	276	100	599 831	100

Source: ŠÚ SR, Regional database, Author's calculations

In mid-sized and large municipalities lived almost 96% of Trenčín region rural population. The domination of urban settlements had the concentration up to 20 000 inhabitants. The development pole of Trenčín region is the city of Trenčín with 58 000 inhabitants. Large urban settlements within the region with the population in the range of 20 000 to 50 000 has 5 settlements (Považská Bystrica, Nové Mesto nad Váhom, Púchov, Partizánske, Bánovce nad Bebravou). However, if we looked at the localization of urban municipalities in the area of Trenčín region, we have to say that it is not suitable for creation of more intense connections between the city and rural municipalities, with the exception of districts Prievidza (3 urban settlements), Ilava (3 urban settlements) and Myjava (2 urban settlements). Large areas of regions Považská Bystrica, Púchov, Bánovce nad Bebravou have only 1 urban settlement. Their localization within the region have very favorable central position.

Different view on Trenčín region settlement structure can be seen, if we have considered also the geographical conditions, accessibility of settlements, their potential arising from the geographical location and nodality. These factors significantly influence the formation of connections among the settlements of different size type (nodal regions or microregions).

**Map 1: Map of Location Natural Characteristics and Seats in Microregions**



Source: Author's work

For such view, it was possible to use Christaller's method, according to which Bašovský, Švecová (2002) evaluated the Slovak municipalities. They have determined hierarchical categories of settlements, which indicate the position of municipalities (nodality) according to following criteria: population, number of work opportunities, population growth, number of commuting workers, employees and students, functions of services from the point of view of their regional reach, the size and significance of the industry, the size and significance of the transportation and available facilities. Arising from authors and by-them-used method, we can divide settlements of Trenčín region into three main groups, which, at the same time, characterize their function within the development process, and also possible administrative-controlling function:

- 1 Fringe municipalities** (settlements localized in isolated and peripheral valleys), from the point of view of accessibility and trafficability, there are presented settlements with the lowest locational potential. On the other hand, they also represent least touched natural environments with high potential for the agriculture, forestry, recreation, and tourism. Mostly, they are located outside main urban routes with relatively low offer of work opportunities, with lower number of inhabitants, and lower possibility of business activities realization.
- 2 Settlements**, which can fulfill the function of **development poles within the microregion**. Here, we can include municipalities with higher concentration of the population and business subjects with relatively central location towards the base, lying on the transportation routes, and able to ensure basic civil services (education, health care, social care). They have the precondition of new nodal connections and specific regional development, for the development of branches falling into the secondary sector, and for the development of services. This type of settlements also includes municipalities of peripheral parts of microregions with lower level of nodality. However, they do not belong directly to the peripheral settlements.
- 3 Settlements as regional cores**, which have direct connection to urbanization routes, represent the development poles typical by great nodality, i.e. the relationship of rural area towards central settlements, with complexly built social infrastructure providing civil services of higher level (high schools, hospitals of 2<sup>nd</sup> type) and higher concentration of business subjects providing more diversified offer of goods and services. In this group, there are mostly urban settlements.

In Trenčín region, according to the introduced categorization, there are 53 peripheral settlements, 18 urban settlements, and 205 settlements with the ability to fulfill the function of the development poles within the microregion. Trenčín region settlements classification is introduced in the Table 3. Urban settlements, and settlements with the ability to fulfill the function of the development poles within the microregion form up to 80.8% from the total number of settlements in Trenčín region. As it was already mentioned, 18 of them is of urban type. The settlements with the ability to fulfill the function of the development poles within the microregion have, from the point of view of locational potential, the precondition of new nodal connections, and specific regional development is 205 settlements, which is 74.3% from the total number of settlements. The question, which rural settlement has the precondition to become the central settlement, is rather difficult. Settlements we suggest, and which in the future could possibly fulfill the function of development poles within the microregion, were determined on the basis of the number of permanently living inhabitants (higher than 1 000), geographical location (locational potential), base formed by the connections with smaller settlements, distance and transportation availability to catchment settlements of urban type, which are the development pole in the region.



**Table 3: Trenčín Region Municipalities Classification According to Locational-Functional Characteristics and Nodality**

<b>District</b>	<b>Fringe municipalities</b>	<b>Municipalities: city, town</b>	<b>Municipalities with possible function of development poles in the microregion</b>
<b>Bánovce nad Bebravou(IX)</b>	18-Uhrovec, 35-Šípkov, 31-Žitná, 29-Uhrovské Podhradie, 34-Čierna Lehota, 33-Trebichava, 30-Omastiná, 32-Kšinná, 36-Slatinka nad Bebravou	Bánovce n. Bebravou	18-Uhrovec, 22-Rybany
<b>Ilava(IV)</b>	16-Horná Poruba, 18-Zliechov, 17-Košecké Podhradie	Ilava, Nová Dubnica, Dubnica nad Váhom	14-Ladce, 7-Pruské
<b>Myjava(I)</b>	5-Podkylava	Myjava Brezová pod Bradlom	6-Krajné 12-Vrbovce
<b>Nové Mesto nad Váhom(II)</b>	22-Stará Lehota, 23-Nová Lehota, 26-Nová Bošáca, 25-Zemianske Podhradie,	Nové Mesto n.V. Stará Turá	2-Podolie, 27-Moravské Lieskové, 7-Lúka
<b>Partizánske(VIII)</b>	19-Klátova Nová Ves, 21Ježkova Ves, 22-Veľký Klíž	Partizánske	4-Chynorany 12-Veľké Uherce
<b>Považská Bystrica(VI)</b>	4-Horná Maríková, 8-Vrchteplá, 5-Papradno 6-Záskalie, 7-Kostolec, 10-Slopná, Pružina, 11-Dolný Lieskov, 25-Podskalie, 26-Horný Lieskov, 21-Domaniža, 13-Dolná Maríková, 17-Brunište, 14-Klieština, 23-Čelkova Lehota, 15-Hatné, 9-Bodina, 27-Počarová 19-Prečín, 22-Sádočné, 24-Ďurďové, 20-Malé Lednice	Považská Bystrica	3-Plevník-Drienové, 16-Udiča
<b>Prievidza(VII)</b>	32-Temeš, 39-Čavoj, 47-Valaská Belá	Prievidza, Bojnice, Handlová, Nováky	5-Bystričany, 36-Nitrianske Pravno, 24-Nitrianske Rudno
<b>Púchov(V)</b>	14-Lazy pod Makytou, 16-Vydrná, 1-Beluša, 17-Mojtín	Púchov	8-Lednice, 3-Lednické Rovné
<b>Trenčín(III)</b>	21-Selec, 20-Horná Súča, 14-Omšenie, 15-Dolná Poruba	Trenčín, Nemšová Trenčianske Teplice	18-Dolná Súča, 3-Melčice-Lieskové, 11-Svinná, 7-Trenčianske Stankovce

Source: Author's work

One of possible ways to solve the issue of municipalities' development is merging of small villages and dissolution of representation authority offices in original municipalities, and also associating of municipalities into larger self-governing units for the purpose of ensuring common administrative and public services with preserving the representation authority offices in original municipalities. Introduced categorization of settlements in Trenčín region is one of very important factors from the point of view of the perspective of further socio-economic development of settlements and regions.

#### 4. Conclusion

Our paper aims at the Trenčín self-governing region as a model area (an example area). The results can be utilized for other Slovak regions and the regions located in the Czech Republic, which, from the point of view of local settlement structure, belong to the European countries with the most scattered settlements structure.

In the course of monitored period, the settlement structure almost did not change. The only exception could be seen in the division of integrated municipality Pruské, where there was created one additional rural settlement – Bohunice. Changes in the settlement structure can be achieved only in long-term period of several decades. Trenčín region settlement structure can be characterized as rural. Size structure of Trenčín region settlements is more favorable in the relationship to the development, than in Slovakia as a whole, because Trenčín region settlements are denser. Small villages up to 500 inhabitants had 30% representation within the settlements structure. Localization of urban settlements in the area of Trenčín region is not favorable for the creation of more intense connections between the city and rural municipalities, although their localization within the region have favorable central position.

Different view was provided, when we have considered the locational-functional characteristics of settlements, which gave us the opportunity of subsequent division of Trenčín region settlements into three groups, which, at the same time, characterize their function in the development, as well as possible administrative-controlling function. Authors have suggested 22 possible settlements with the ability to fulfill the function of the development poles within the region.

Modern, rational organization of the settlement structure belongs to current government program priorities arising from the principles of cohesive policy of the European Union 2014-2020 and realization of the Strategy Europe 2020. This fact is determined mainly by effective use of public resources on the local level.

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#### *References*

- [1] Albæk, E.; Lawrence, R.; Strömberg, L. and Strählberg, K. (1996). *Nordic Local Government – Developmental Trends and Reform Activities in the Postwar Period*. Helsinki: Association of Finnish Local Authorities.
- [2] Bašovský, O. and Švecová, A. (2002). Hierarchia sídelného systému SR. In: *Hrnčiarová, T. et al., Atlas krajiny*, Bratislava: Veda.

- [3] Bočáková, O., Kubičková, D. (2015). Satisfaction of the inhabitants with selected aspects of social policy in the region. In: Klimová, V.; Žitek, V. (eds.). *18th International Colloquium on Regional Sciences. Conference Proceedings*. Brno: Masarykova Univerzita. pp. 391 – 397
- [4] Horváth, P., Mikuš, D. (2016). The political aspects of transformations into regionalization of Slovakia. In: *SGEM 2016 : 3rd International Multidisciplinary Scientific Conference on Social Sciences and Arts : Political Sciences, Law, Finance, Economic and Tourism. Book 2, Volume I : Political Sciences*. Sofia : STEF92 Technology, 2016. pp. 657-663.
- [5] Infante-Amate J. (2016). The rise and fall of the *cortijo* system: scattered rural settlements and the colonization of land in Spain's Mediterranean mountains since 1581. In: *Journal of Historical Geography*. Volume 54, Oct. 2016, pp.63 – 75.
- [6] Jeřábek, Z., Čapošová, E. (2016). Institutional Changes and Qualification Requirements of a Company. In: *Polish Journal of Management Studies*. ISSN 2081-7452, Vol. 14, no. 2 (2016), pp. 93-103.
- [7] Klimovský, D. (2010). Konsolidačné reformy a decentralizácia v európskych podmienkach. In: *Acta Polilogica* 2, 3, pp. 86 – 96.
- [8] Kreci, V. and Ymeri, B. (2010). Conceptualizing Territorial Reorganization Policy Interventions in the Republic of Macedonia. In: *Swianiewicz, P. (ed.). Territorial Consolidation Reforms in Europe*. Budapest: OSI/LGI, pp. 129 – 157.
- [9] Nemeč, P., Imrovič, M. (2017). Attitude of Small Municipalities in Slovakia to Requests for Information Disclosure. In: *Current Trends and Public Administration: Conference Proceeding*. Uherské Hradiště: Faculty of Administration and Economic Studies, ISBN 978-80-906614-5-5, pp. 147-162
- [10] Nižňanský, V. et al. (2009). *Medziobecná spolupráca a zlučovanie obcí na Slovensku*. Výskumná štúdia, Bratislava: Mercury, spol. s.r.o., 59 p.
- [11] Smith, K.; Kvaloy, A. and Schefold, D. (2005). *Local and Regional Democracy in Netherlands. Príspevok prezentovaný na "Congress of Local and Regional Authorities: 12<sup>th</sup> Plenary Session"*, Strasbourg.
- [12] Swianiewicz, P. (2010). Territorial Fragmentation As a Problem, Consolidation As a Solution? In: *Swianiewicz, P. (ed.). Territorial Consolidation Reforms in Europe*. Budapest: OSI/LGI, pp. 1 – 23.
- [13] Šramel, B. (2017). Public Prosecution Service in the Political System of the Slovak Republic: Really Politically Independent Public Authority? In: *The Quality of Democracy in the New Political Era : Proceedings of the 4th Academos Conference 2017* / Editor: Andrei Taranu. - 1. vyd. - Bologna : Filodiritto, 2017. pp. 64-68.
- [14] Vrabková, I., Vaňková, I. (2015). *Evaluation Models of Efficiency and Quality of Bed Care in Hospitals*. Ostrava: VŠB Technická univerzita Ostrava. 184 p.

## **Manufacturing vs Services: Changes in Intra-EU Trade. The Case of the Visegrád Countries**

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### **Abstract**

*There is a common belief that the Visegrád countries (the V4) they have benefited enormously from being part of the Internal Market. Nowadays, the EU Internal Market faces new, extraordinary challenges: the processes of servitization and digitalisation, which have exerted unquestionable impact upon the intra-EU trade. This paper is aimed at identifying trends in the evolution in intra-EU exports of the Visegrád countries vis à vis selected EU Member States. To this end we have selected 28 manufacturing and service sectors of the EU Internal Market and analysed values and changes in RCA and TBI indices of the aforementioned countries in 2010-2016. On the basis of our research we can state, that the V4 countries enjoy a strong and strengthening position in intra-EU trade in industrial goods, with the exception of high-technology products, while their performance in trade in services within the EU market is much less impressive, even though some of them tend to specialise in certain sectors.*

**Keywords:** EU Internal Market, intra-EU trade, manufacturing, revealed comparative advantage, servitization

**JEL Classification:** F10, F13, F15

### **1. Introduction**

In 2019 the Visegrád countries (Hungary, Poland, The Czech Republic, Slovakia – hereinafter – the V4) will celebrate the fifteenth anniversary of their membership in the European Union (EU). Over this period of time, they have made incredible steps to bring the structure of their economies, including trade, closer to that of modern market economies of the old Member States. Nowadays, their successes are commonly attributed to the benefits of free trade in goods and services within the Internal Market. However, at the same time, the latter has been changing dramatically due to huge competition pressure from third countries; evolution of consumer preferences from the economy of ownership to the economy of access (to services, including information) and servitization process. It seems that without a new kick off from services (within the framework of servitization), some manufacturing sectors will face even harder price competition from third countries and the process of offshoring and moving away from the EU to third countries will intensify. Our recent research (Ambroziak, 2015; 2017) reveals that the EU, as a whole, follows the latest trends and tackles these issues. Nonetheless, the EU is not a homogeneous organism, and the EU Member States' structure of economy and trade can vary dramatically. This may also apply to Central and East European countries, including the V4.

There are many research on changes in trade patterns of the Visegrád countries that have taken place following their EU accession, however, they focus either on effects observed in

individual countries (Fojtíková, 2014), in selected sectors (Melikhova et.al, 2015; Stefaniak-Kopoboru, Kuczevska, 2016) or results of intra-industry trade (Grančay et. al., 2016). Moreover, there are also other studies addressing the transformation and openness of the V4 economies in the EU (Majerová, Nevima, 2016), as well as the impact of the Common Commercial Policy of the EU on their export performance (Akhvlediani, Śledziewska, 2017) and consequences of the crisis (Kovarnik, 2017). However, apparently there is a niche for research on the scope and scale of the similarity of the structure of trade in goods and services between the V4 countries and the EU leading economies in recent years.

Considering all the aforementioned remarks, the aim of the paper is to identify trends in changes in intra EU trade of the Visegrád countries vis á vis three major economic leaders in the EU trade: UK, Germany and France (hereinafter – the B3) in 2010-2016. We assume that after twelve years of the EU membership, the trajectory along which the V4 countries' intra-EU trade developed should follow trends observed in the EU. To verify this hypothesis we will analyse changes in the V4 specialisation patterns (in terms of revealed comparative advantage and trade balance) in intra-EU trade in selected sectors broken down by their technological advancement.

The paper is constructed as follows: in the next part we discuss selected indices concerning trade specialisation (revealed comparative advantage and trade balance), showing their pros and cons, the methodology of selection and classification of the sectors, then we consider data limitations, next we present and discuss our research findings in terms of structure and specialisation of intra-EU exports of the V4 countries. Finally, we conclude and comment on the position of the V4 countries in the EU Internal Market, as well as similarities they bear to the economic and trade leaders in the EU.

## **2. Methodology, Data, Sectors Selection and Classification**

To achieve the aim of the paper, we have selected 28 manufacturing and service sectors of the EU Internal Market and analysed specialisation indices: values and changes in RCA and TBI indices of the aforementioned countries in 2010-2016.

### ***2.1 Selection and Classification of Sectors***

We decided to focus our research only on business oriented activities, which are directly linked to the concept of the EU Internal Market. Therefore, we selected 11 manufacturing sectors and 17 service sectors (according to NACE Rev. 2), excluding services, especially public ones, not dedicated and intended to be offered across European borders. Then, following Lall (2000) concept, we classified them into subgroups broken down by their technological advancement: resource-based manufacturing (RBM), resource-based and low-technology manufacturing (LTM/LTS), low-technology manufacturing/services (LTM/LTS), medium technology manufacturing/services (MTM/MTS), high-technology manufacturing/services (HTM/HTS) (Table 1).

Data for trade in goods and services were obtained from the Eurostat database. The research is focused on 2010-2016 as years following the economic crisis being a kind of a breakpoint for changes in the economy and intra-EU trade, as well due to the availability of data. As for France and Slovakia due to the data limitations years to be covered are 2011-2016 and 2013-2016 respectively. Presented results reflect weighted averages of indices calculated for selected sectors within a given category of sectors technology advancement.

## 2.2. Specialisation Indices

Many researchers have attempted to approximate specialisation in international trade, using different indicators. We decided to examine two of them together in order to verify whether a given country has a comparative advantage in exports and a positive/negative trade balance.

A country's comparative advantage in foreign trade for a certain good is traditionally based on Balassa index (Balassa, 1965), which shows the level of a country's export specialization in a given product compared to the world average (in our case to other Member States within the EU Internal Market, thus hereinafter indices used in our research implicitly assume that companies of the country  $i$  compete with firms from the EU internal market rather than with companies that export to the EU from the third countries). Its equation can be written as follows:

$$RCA(B)_{inEUex;y}^i = \frac{x_{inEUex;y}^i / \sum x_{inEUex;y}^i}{x_{inEUex;y}^{EU} / \sum x_{inEUex;y}^{EU}} \quad (1)$$

where  $RCA(B)_{inEUex;y}^i$  represents revealed comparative advantage of country  $i$  for group of products  $j$ ;  $x_{inEUex;y}^i$  denotes value of intra EU export of sector  $y$  of country  $i$ ; and  $x_{inEUex;y}^{EU}$  reflects value of intra EU export of sector  $y$  of the EU. In our case, it compares the weight of exports of certain goods or services in total intra-EU exports from a given country with the weight of the same category at the EU level against intra EU trade.

The value of the index ranges from 0 to infinity: if  $RCA(B)_{inEUex;y}^i$  is greater than one the country  $i$  has comparative advantage in group of products  $j$ , while in contrast, if  $RCA(B)_{inEUex;y}^i$  is less than one, country  $i$  has comparative disadvantage in a given group of products  $j$ . As observed by many researchers, Balassa index in its original form produces values that cannot be compared on both sides of one, it can take extreme values and its distribution is highly unstable. Therefore many researchers proposed some changes in standard Balassa's RCA (e.g. a symmetric RCA by Laursen (1998); a RCA index divided on the index average across products by Proudman and Redding (2000); additive RCA with a stable mean by Hoen and Oosterhaven (2006)). Finally, following Laursen's (1998) advice that the index under analysis should always be made symmetric, we apply Vollrath's (1991) concept and take the logarithm of Balassa index:

$$RCA_{inEUex;y}^i = \ln(RCA(B)_{inEUex;y}^i) \quad (2)$$

Traditionally, RCA index is interpreted as a quantification of the commodity-specific degree of comparative advantage enjoyed by one country vis-à-vis any other country. However, there are at least two other interpretations according to which it provides a commodity-specific ranking of countries by the degree of comparative advantage or a demarcation between countries that enjoy a comparative advantage in a particular commodity (Balance et al, 1987). Other researchers observed that Balassa's RCA yields information about the pattern of international specialisation insofar as it evaluates an economy's export share in an individual sector relative to a benchmark – the economy's average export share in all sectors (Proudman and Redding, 2000).

The standard Balassa's index does not account for import trade flows (see more Kunimoto, 1977). This problem can be addressed by the index, which reflects the importance of export and import flows to the country - net trade. Based on Michael (1965) research, Trade Balance

Index (Lafay, 1992) allows examining if a country specialises in exports of a specific group of products:

$$TBI_{inEU;y}^i = \frac{(x_{inEU;y}^i - m_{inEU;y}^i)}{(x_{inEU;y}^i + m_{inEU;y}^i)} \quad (3)$$

where  $TBI_{inEU;y}^i$  denotes trade balance index of country  $i$  for group of products  $j$ ;  $x_{inEU;y}^i$  represents the value of intra-EU exports of sector  $y$  of country  $i$ , and  $m_{inEU;y}^i$  shows value of intra-EU imports of group of products  $y$  of country  $i$ . Values of the index range from -1 to +1. It means that TBI clearly indicates whether a country specialises in exports (as net-exporter) or imports (net-importer) of a specific group of products.

### 3. Specialisation of the V4 Countries in the Intra-EU Exports

Following Widodo (2009) “products mapping” we used two crucial variables to analyse the V4 and the B3 countries’ comparative advantage: international competitiveness/specialisation (logarithmic) Balassa index and Trade Balance Index (Fig. 1). Consequently, we were able to distinguish four groups (A, B, C, D) of sectors, depending on the levels of both their comparative advantage (RCA) and export specialisation (TBI) in intra-EU exports in 2016 (Fig. 1).

The V4 countries recorded revealed comparative advantage and positive trade balance in intra-EU exports in products of MTM/HTM, MTM (with the exception of Poland) and LTM (with the exception of Hungary) (Table 2). They also noted positive specialisation indices in RBM/LTM, however with a close to neutral TBI (group A and B). It means that the V4 countries, as net-exporters, specialised in trade in low and medium technology goods. In years 2010-2016, they recorded an increase in both indices, with the exception of MTM/HTM group, in 2016 compared to 2010. It means, that they have improved their position vis-à-vis other EU Member States, as the UK and France have become net-importers with comparative disadvantage in intra EU trade (group D) and trade indices for Germany, which nevertheless continues to maintain its strong position, have worsened in recent years.

Reverse tendencies were found out in intra-EU trade in highly advanced products (HTM). Both the UK and Germany were part of group A or B due to their revealed comparative advantage and being respectively a net-exporter and a net-importer. In contrast to them, France and the V4 countries did not specialise in trade in these goods: as net importers (with the exception of Hungary) they noted comparative dis-advantage (group D). However, in the period selected for the research, the V4 countries improved their indices for HTM, in some cases even substantially, which may suggest there is still space for their development.

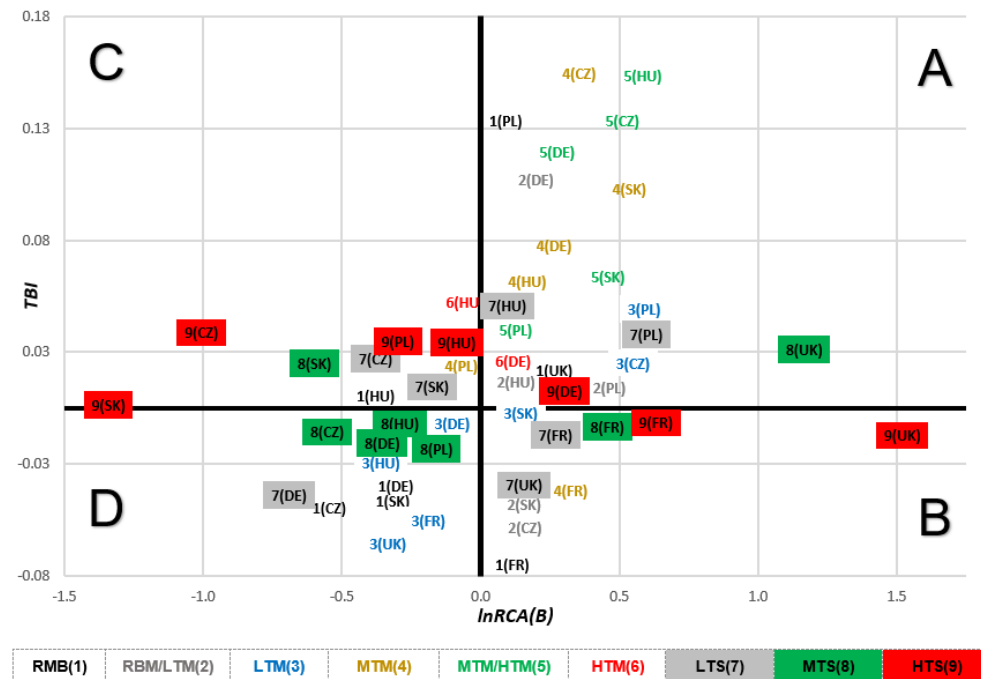
As regards RBM products, only Poland and the UK, among countries in the research sample, recorded both comparative advantage and export-specialisation in trade in RBM products (group A). However, we need to stress that while Poland focused on (and improved its position in) its export in agri-food goods, the UK remained a strong net-exporter of petroleum products.

Our findings for intra-EU trade in services produced a different picture. The V4 countries noted comparative dis-advantage in intra-EU exports in all types of services with one specific exception of Poland for LTS (especially due to growth of warehousing, construction, transport and its related activities – group A). At the same time, they were net-exporters in all categories of services (with the exception for Poland and the Czech Republic for MTS) (group C). It means, that although they did not exhibit a comparative advantage in intra-EU exports, they successfully entered the EU Internal Market of services. Moreover, only Hungary improved its indices in all categories of services, followed by Poland, who developed comparative

advantage in LTM and MTS. Both the Czech Republic and Slovakia recorded a decrease in their specialisation indices.

In opposition to that, the UK and France retained their comparative advantage in low and high technological advanced services, although as net-importers (group B). At this same time, their performance in LTS deteriorated, while it improved in HTS in 2016 as compared to 2010. In the period under research Germany’s trade in LTS and MTS recorded neither comparative advantage nor export-specialization in trade in services (group D), showing some positive trends in HTS (group A).

**Figure 1: Revealed Specialisation Position of the V4 Countries in Intra-EU Exports in 2016 (lnRCA(B) and TBI)**



Note: in order to make the chart readable, the positions of the following sectors have not been marked in group D: 2(FR), 2(UK), 4(UK), 5(UK), 5(FR), 6(SK); 6(PL); 6(CZ), 6(FR) and in group B: 5(FR). Different colours represent different manufacturing or service sectors, while numbers correspond to technology advancement of goods or services (see Tab. 1).

Source: own calculations based on Eurostat

#### 4. Conclusion

Based on our research findings, we can confirm that the structure of the intra-EU exports of V4 countries substantially differs from that of the United Kingdom and France, while many similarities have been traced between the V4 and Germany. Beyond any doubt we may argue that the V4 countries have comparative advantage and are net-exporters in intra-EU exports in industrial goods (with the exception of high technologically advanced products). Moreover, they improved their performance in recent years which can be interpreted as a confirmation of a strong position and a broad network of cooperative linkages their industry has developed



within the EU Internal Market. The only source of concern is the most important sector of high technology products. On one hand, the V4 countries were net-importers and did not have comparative advantage in intra-EU exports in this sector, however, on the other hand, they substantially improved their indices in the period under research, which may be indicative of a positive trend.

Slightly different picture was observed in intra EU trade in services. Definitely, it is impossible to formulate any universal remarks concerning all V4 countries. In many sectors, although they did not have comparative advantage in trade in selected service sectors, they remained being net-exporters. It means they provided services to other Member States, while seeking to ensure that their domestic demand is substantially satisfied by domestic service providers. That can suggest that if the V4 countries improve their performance of comparative advantage, they will be able to offer more services in the EU Internal Market, which should produce more added value to their economies. Moreover, a big variety of trade positions (net exporters and net-importers), differences in comparative advantage (or dis-advantage), as well as differences in directions in which the aforementioned indices evolve for trade in all service sectors can suggest, that two of the V4 countries, Hungary and Poland, seek for the niche to expand their trade.

Summing up we can state that, unlike in intra-EU exports in industrial goods, the V4 countries tend to specialise only in selected service sectors. Apparently, these tendencies, if a free movement of services is ensured within the EU and manufacturers from the V4 countries join the servitization process, can bring some benefits to the V4 economies, including the building up of a very powerful industry in terms of its position in intra-EU trade, which calls for further, more in-depth analysis.

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### **References**

- [1] Akhvlediani, T., Śledziewska, K. (2017). The Impacts Of Common Commercial Policy on Export Performances of Visegrad Countries. *Prague Economic Papers*, vol. 26, iss. 1, pp. 3–18.
- [2] Ambroziak, A.A. (2015). Reindustrialization or servitization: trade tendencies in the European Union internal market. In Małuszyńska, E., Mazur, G., Idziak P. (eds.). *Unia Europejska wobec wyzwań przyszłości. Aspekty prawne, finansowe i handlowe*. Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu, Poznań, pp. 225–240.
- [3] Ambroziak, A.A. (2017). Servitization or reindustrialization of the EU in the context of the economic crisis of 2008-2010. *Yearbook of Polish European Studies*, vol. 19.
- [4] Balassa, B. (1965). Trade Liberalization and “Revealed” Comparative Advantage. *The Manchester School of Economic and Social Studies*, vol. 33, iss. 2, pp. 99–123.
- [5] Balance R.H., Forstner H., Murray T. (1987). Consistency Test of Alternative Measures of Comparative Advantage. *The Review of Economics and Statistics*, vol. 69, iss. 1, pp. 157–161.

- [6] Fojtíková, L. (2014). Foreign Trade of the Czech Republic after Ten Years of MemberShip in the EU. In International Conference on European Integration. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 127–137.
- [7] Grančay, M., Grančay, N., Vveinhardt, J. (2016). Intra-industry trade in the Visegrad countries: Does the linder hypothesis hold? *Acta Oeconomica*, vol. 66, iss. 2, pp. 283–306.
- [8] Hoen A., Oosterhaven J. (2006). On the Measurement of Comparative Advantage. *The Annals of Regional Science*, vol. 40, iss. 3, pp. 677–691.
- [9] Kovarnik, J. (2017). Selected Issues of Foreign Trade of Central European Countries, *Hradec Economic Days*, vol. 7, iss. 1, pp. 439–448.
- [10] Kunimoto, K. (1977). Typology of Trade Intensity Indices. *Hitotsubashi Journal of Economics*, vol. 17, iss. 2, pp. 15–32.
- [11] Lafay G. (1992). The Measurement of Revealed Comparative Advantages. In Dagenais M.G., Muet P.A. (eds.). *International Trade Modeling*, Chapman & Hill, London.
- [12] Lall, S. (2000). The Technological Structure and Performance of Developing Country Manufactured Exports, 1958-98. *Oxford Development Studies*, vol. 28, iss. 3, pp. 337–369.
- [13] Majerová, I., Nevima, J. (2016). The Issue of Competitiveness: A Case of Visegrad Group Plus Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 572–583.
- [14] Melikhova, Y., Baz´o, L., Holubcova I., Camacho, J.A. (2015). Trade in services and tertiarisation of the Visegrád Four economies. *Post-Communist Economies*, vol. 27, iss. 1, pp. 1–22.
- [15] Proudman, J., Redding, S. (2000). Evolving patterns of international trade. *Review of International Economics*, vol. 8, pp. 373–396.
- [16] Stefaniak-Kopoboru, J., Kuczevska J. (2016). Export Specialization in Services of the Visegrad Countries. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 11(2), pp. 265–284. DOI:<http://dx.doi.org/10.12775/EQUIL.2016.012>.
- [17] Vollrath, T.L. (1991). A Theoretical Evaluation of Alternative Trade Intensity Measures of Revealed Comparative Advantage. *Weltwirtschaftliches Archiv*, vol. 127, iss. 2, pp. 265–280.
- [18] Widodo T. (2009). Comparative Advantage: Theory, Empirical Measures and Case Studies. *Review of Economic and Business Studies*, vol. 2, iss. 2, pp. 57–81.

## Appendix

Table 1: Selected Business Sectors of the EU Internal Market

Manufacturing sectors	Service sectors
C10–12 – Manufacture of food products; beverages and tobacco products (RBM)	F – Construction (LTS)
C13–15 – Manufacture of textiles, wearing apparel, leather and related products (LTM)	H49 – Land transport and via pipelines (LTS)
C16–18 – Manufacture of wood, paper, printing and reproduction (LTM)	H50 – Water transport (LTS)
C19 – Manufacture of coke and refined petroleum products (RBM)	H51 – Air transport (HTS)
C20 – Manufacture of chemicals and chemical products (MTM)	H52 – Warehousing and support activities for transportation (LTS)
C21 – Manufacture of basic pharmaceutical products and preparations (HTM)	H53 – Postal and courier activities (LTS)
C22–23 – Manufacture of rubber and plastic products and other non-metallic mineral products (RBM/LTM)	J59–60 – Motion picture, video, television programme production; programming and broadcasting activities (MTS)
C24–25 – Manufacture of basic metals and fabricated metal products, except machinery and equipment (LTM)	J61 – Telecommunications (MTS)
C26–28 – Manufacture of computer, electronic and optical products, manufacture of electrical equipment and machinery (MTM/HTM)	J62–63 – Computer programming, consultancy, and information service activities (HTS)
C29–30 – Manufacture of motor vehicles, trailers, and of other transport equipment (MTM)	M69–70 – Legal and accounting activities; activities of head offices; management consultancy activities (MTS)
C31–32 – Manufacture of furniture; other manufacturing (LTM)	M71 – Architectural and engineering activities; technical testing and analysis (HTS)
	M72 – Scientific research and development (HTS)
	M73 – Advertising and market research (HTS)
	C33 – Repair and installation of machinery and equipment (MTS)
	N77 – Rental and leasing activities (LTS)
	N79 – Travel agency, tour operator reservation service and related activities (LTS)
	K – Financial and insurance activities (HTS)

Source: own compilation (classification based on Lall (2000)).

Table 2: Values and Change in Values of Revealed Comparative Advantage Index and Trade Balance Index in the V4 and the B3 Countries in 2016 as Compared to 2010

		HU	PL	CZ	SK	UK	DE	FR
RBM (1)	RCA	-0.35/++	0.09/++	-0.55/-	-0.33/-	0.2/-	-0.31/+	-0.01/-
	TBI	0.00/+	0.13/++	-0.04/-	-0.04/--	0.02/--	-0.03/++	-0.07/-
RBM/ LTM (2)	RCA	0.10/++	0.27/++	0.07/-	0.06/++	-0.55/+	0.14/-	-0.06/--
	TBI	0.01/-	0.00/--	-0.04/-	-0.04/-	-0.25/--	0.10/--	-0.16/-
LTM (3)	RCA	-0.42/++	0.51/++	0.28/++	0.09/--	-0.43/+	-0.03/-	-0.19/+
	TBI	-0.03/-	0.04/++	0.02/+	0.01/--	-0.06/--	0.00/--	-0.05/-
MTM (4)	RCA	0.04/++	-0.13/--	0.35/+	0.54/+	-0.12/+	0.26/-	0.19/-
	TBI	0.05/++	0.02/--	0.15/+	0.1/-	-0.12/--	0.07/-	-0.04/++
MTM/ HTM (5)	RCA	0.58/--	0.03/--	0.42/-	0.39/-	-0.43/--	0.19/--	-0.22/-
	TBI	0.15/--	0.03/++	0.13/-	0.06/-	-0.28/--	0.11/-	-0.18/+
HTM (6)	RCA	-0.10/++	-1.32/+	-1.11/++	-1.77/++	0.18/+	0.02/--	-0.07/-
	TBI	0.05/++	-0.4/+	-0.3/++	-0.54/+	-0.22/--	0.02/-	-0.08/+
LTS (7)	RCA	-0.01/+	0.55/++	-0.38/--	-0.23/-	0.09/-	-0.69/-	0.15/--
	TBI	0.04/+	0.04/++	0.02/--	0.01/+	-0.04/-	-0.04/-	-0.01/--
MTS (8)	RCA	-0.22/-	-0.16/+	-0.62/--	-0.6/--	1.17/++	-0.41/-	0.46/-
	TBI	0.00/+	-0.01/-	-0.01/+	0.02/-	0.03/++	-0.01/++	-0.01/--
HTS (9)	RCA	-0.12/++	-0.42/-	-1.01/--	-1.34/--	1.45/+	0.28/-	0.53/++
	TBI	0.02/+	0.02/++	0.03/++	0.00/--	-0.01/+	0.01/-	0.00/+

Note: next to the value of the indicator:

++ an increase above average increase of countries under research

+ an increase below average increase of countries under research

- a decrease below average decrease of countries under research

-- a decrease above average decrease of countries under research

Source: own calculations based on Eurostat.

# The EU-US Economic Relations in Uncertain Times: What Is the Future?

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## **Abstract**

*The transatlantic economy has been a crucial backbone of the global economy for decades. Despite relatively integrated relations, tariff and non-tariff barriers remain a burden. Studies estimate that further liberalization of trade between the EU and US could bring additional savings and could contribute to the enabling of untapped potential in bilateral trade. However, protectionist tendencies and new approaches toward trade are bringing a U-turn to multilateral and bilateral trade liberalization. This has in the transatlantic context resulted in putting trade talks on hold and the future of the traditional EU-US economic partnership is being questioned. The paper analyses the main challenges for relations in the light of recent developments that eventually could further nature of the mutual trade ties. It argues that not only protectionist tendencies, but also the experience with Transatlantic Trade and Economic Partnership (TTIP) negotiations show that support for further fostering of the relations can be perceived as an obstacle.*

**Keywords:** EU-US Trade, FDIs, transatlantic economic relations, TTIP

**JEL Classification:** F150, F13, F53

## **1. Introduction**

Transatlantic economic relations are in terms of their volume and nature often described as a backbone of the global economy. The EU-US generates approximately 30% of the world GDP in terms of purchasing power. No commercial artery in the world is as large as the investment artery forged between the United States and Europe: total transatlantic foreign affiliate sales topped an estimated \$5.5 trillion in 2015. (Hamilton, Quinlan, 2017). In terms of trade, despite rising markets such as China, for the EU, and the US, mutual trade remains significant. No other entities enjoy more bilateral trade between each other and no other relations have such a complex nature.

However, EU-US economic relations have in history experienced both setbacks and high points. Despite the gradual removal of trade barriers, particularly through mutual recognition agreements and relatively low tariff barriers in mutual trade, there is still some potential that could be untapped by complex trade liberalization. In 2013, trade negotiations on creating a transatlantic free trade agreement were launched. This was on the one hand welcomed by the business community, which was keen on the removal of additional trade barriers and particularly on possible regulatory cooperation, which is the core issue in EU-US trade. On the other hand, the trade talks were met with criticism from the public in some EU member states, where EU citizens expressed their fear over lowering current European standards, incorporating unfair practices through the Interstate Dispute Settlement and other issues.

## 2. Problem Formulation and Methodology

The issues of world order and the positioning of the EU and US in international relations have been a scope for research in many works in the past. Kagan (2003) argues that the EU has been working on establishing an order based on treaties and common institutions and has very limited interest in investing in the military, whereas the US want to maintain military capacities able to operate in various regions of the world. The two approaches are so different that the Americans seems to be from Mars and the Europeans from Venus. In later debate, Kupchan (2012) points out that the world order is not based on strong hegemonic positions and the world will be a world of no one. The West's leading nations are stumbling both economically and politically. The EU is struggling due to the 'renationalization of politics', while the US ability to provide steady leadership is hampered by partisan polarization. To revive its power, "The West will have to rise to the occasion on two fronts. It will have to recover its political and economic vitality and retain its cohesion even as its era of primacy gradually comes to an end." (Kupchan, 2012).

However, looking at transatlantic economic relations closer, despite various trade disputes in the past (bananas, Boeing-Airbus, chlorinated chickens and many others), economic ties remain stable and crucial to both entities. In the light of the frozen trade talks and the new US administration, it leads to the question of how current transatlantic economic relations can be described. What are the main challenges and risks for preserving the importance of the relations for both sides of the Atlantic? Do the main risks arise from domestic policies?

By using descriptive analysis, the first part of this paper focuses on the nature of EU-US economic relations and describes the trends and main features of economic cooperation. Furthermore, the current focus and approach of US trade policy is analysed. The paper argues that not only can the new approach of the Trump administration be seen as a threat to economic relations but the experience from the 15 rounds of the currently frozen trade negotiations between the EU and the US also shows how a lack of public support can be an obstacle in the future fostering of the EU-US partnership.

### *2.1 Some Selected Drivers of the Transatlantic Economic Ties*

The stable business environment, purchasing power and particularly historical ties have contributed to the massive volume of trade and investment flowing from one side of the Atlantic to the other. Despite the dynamic growth of the bilateral trade of both entities with emerging markets and their rising role in the global economy, where in the case of the EU, the US remain the most important trading partner in total EU trade with a share of 17.8%, just before China with a share of 14.9%. (European Commission, 2016). However, the intensity and volume of trade is only part of the power of bilateral economic ties. The transatlantic economy generates 5.5 trillion EUR in total commercial sales and employs approximately 15 million people in mutually "on-shored" jobs on both sides of the Atlantic" (Hamilton, Quinlan 2017). Nonetheless, the EU has been enjoying a trade surplus with the US for years and in 2016 the surplus reached 112.9bn EUR (Eurostat, 2017). The backbone of the relations are FDIs, which show the integration of the mutual ties. At the end of 2012, EU residents had foreign direct investments in the United States valued at \$1,647.6 billion, or 62.2% of total foreign direct investments in the United States. (Cooper, 2014). In the EU, US FDI represents approximately 40% of all incoming FDI. The volume of FDIs also reflects the number of jobs which US foreign affiliates have created in Europe. In 2014, US companies employed approximately 4.5 million workers in the EU. Hamilton and Quinlan estimate that in 2015 the number increased by 140 000 to approximately 4.7 million jobs. (Hamilton, Quinlan, 2017).

Transatlantic economic ties heavily benefit from investments that are oriented on high value added, such as portfolio investment, banking claims, trade and affiliate sales in goods and services, mutual R&D investment, patent cooperation, technology flows, digital trade, and sales of knowledge-intensive services. (Hamilton, Quinlan, 2017)

## ***2.2 Trump Trade Policy and its Implications for the EU-US Relations***

Uncertainty about the preservation of the highly integrated transatlantic economy started to be mentioned in the light of the candidacy of Donald Trump in the presidential elections of 2016. In his campaign, Donald Trump presented restrictive measures in trade with the EU as a possible way to reduce the trade deficit and bring lost jobs back to the US. Trump's "America First" message, as one of the key topics of his campaign, raised many questions and doubts about its possible implementation and implications for other countries and also the EU.

The "America First" approach of the new US administration is built on trends and developments that resulted in negative effects on the US economy, mainly through job losses. Their losses have, according to Schneider-Petsinger (2017), several causes. First, the changing pattern of the global economy and rising role of China has also had a direct impact on the US economy. Autor, Dorn and Hanson (2016), claim that the growing imports from China to the US between 1999 and 2011 resulted in the loss of more than 2.4 million jobs. Schneider-Petsinger (2017) also sees the introduction of automation and new technologies in manufacturing as a crucial reason that might be behind the job cuts in the US.

As mentioned above, trade is an essential point but not the most significant in cutting jobs. Global developments together with slow adjustment and ineffective policies stand behind the new challenges that the US economy is facing. Schneider-Petsinger argues that trade deficits are not the key problem and cannot be blamed for job losses in the US.

Nevertheless, the rhetoric and campaign of Donald Trump was built on blaming trade liberalization and globalization for jobs losses and moving businesses from the US to countries with lower labour costs.

As a part of the new US administration's strategy, the government started to reconsider bilateral trade agreements and seek ways to prefer the "America First" commitment made in the campaign. This has been in contradiction to the previous administration, where B. Obama supported trade liberalization and initiatives as an instrument helping the US to preserve its role as a superpower in the world economy. One of such initiatives was the Trans-Pacific Partnership, a trade pact that includes 11 countries, and represents approximately 40% of global GDP. The aim of the TPP was to open markets with agriculture products, services and high-end manufacturing. Furthermore, the pact had to react to the new challenges which trade faces, such as the digital economy, rule-based trade and the investment system. (Meltzer, 2015)

The commitments of the new US administration described above resulted in the dropping of US participation in the Trans-Pacific Partnership.

Another very crucial step which followed the commitments of D. Trump in his campaign was launching a renegotiation process for NAFTA - with Canada and Mexico. The US government saw the current agreement from 1993 as harmful for the US, as "trade deficits have exploded, thousands of factories have closed, and millions of Americans have found themselves stranded, no longer able to utilize the skills for which they had been trained" (USTR, 2017).

The trade deficit which the US administration is worrying about in NAFTA is perceived as the main reason for the trade deficit and the cause of moving factories to Mexico and Canada. Renegotiation should support the businesses that benefit from cheaper labour in Mexico to

move their production back to the US. However, the talks have not achieved much so far. No progress has been made on the crucial parts, such as dispute settlements, the automotive industry (origin rules, supply chains), agriculture (supply management), and public procurement. The countries remain very divided. The proposal of a “sunset clause”, which suggests an expiration of NAFTA after 5 years if the parties do not agree to extend it, also remains controversial.

### **2.3 Launching and Freezing of TTIP**

Transatlantic economic relations have been enjoying a high volume of trade and investment through low tariff barriers (in almost all areas) since the beginning of the 1990s.

A new breath into the idea of complex trade liberalization in the transatlantic space was brought by the US administration under B. Obama, which was based on the results of the bilateral High Level Working Group on Jobs and Growth. In 2013, B. Obama, M. Barosso and H. Van Rompuy announced the launch of negotiations on a free trade agreement, known as the Transatlantic Trade and Investment Partnership. In the light of frozen WTO multilateral negotiations, the spaghetti bowl (Bhagwati, 1995) with regional trade agreements became a strong instrument for bilateral trade liberalization.

The trade negotiations on liberalization between the US and the EU started in 2013, with an ambition to remove most tariff barriers, but particularly to focus on non-tariff impediments that would stimulate EU-US trade and support the potential which, due to various measures, could not be fully realized. The business community had particularly been calling for further trade liberalization in the past. However, none of these attempts had been successful in the past. As the EU was experiencing sluggish economic growth and a growing voice from the business community on both sides of the Atlantic started to call for a trade agreement between the EU and the US, it seemed logical that trade negotiations would have support to be launched. Through TTIP, both sides also wanted to confirm the power of the transatlantic partnership in a changing world economy, where the traditional powers and democratic values traditionally represented by the US and the EU were declining.

Kupchan points out that despite the fact that TTIP could be seen as a “golden opportunity” to expand economic growth and jobs and as an anchor of liberal values, the transatlantic partnership, given its economic size and democracy-based rules, has a strong voice that must actively contribute toward shaping an international system and keep its eyes on the prize and work with emerging powers to fashion a new rules-based system for the twenty-first century” (Kupchan, 2015).

Despite the well-developed architecture of bilateral cooperation through various political and expert bodies which identified issues in trade, the negotiations were expected to be hard and long for several reasons. One of the most complicated areas lie in regulatory divergences.

Within the three parts of the trade talks concerning market access there included areas such as public procurement (where the US was still to very limited extent open to EU companies), removal of tariff barriers, and issues such as regulation of services or rules of origin.

In the area of regulatory cooperation, both entities have worked on adopting mechanisms and mutual recognition agreements that could remove additional burdens coming from dual standards. Nevertheless, these attempts have not always been successful. The autonomy of legislators and certification authorities on the US side and different views on the EU side touch standards and main principles which both entities preserve and cannot be subject to a trade agreement. In general, the approaches of both entities differ in perception of and management

of risks. The US on one hand prefers the formula of “innocent before proven guilty”, where the science-based approach to risk analysis is likely to protect the vested interests of producers, manufacturers and distributors rather than the legitimate interests of consumers (Grmelová, 2016). The EU, on the other hand, with the use of the so-called precautionary principle “guilty until proven innocent” can ban the placing of potentially dangerous products on the European market.

However, due to the complexity of trade and the obstacles involved, the negotiations became stigmatized by criticism towards lack of transparency. The rising opposition against TTIP negotiations showed how fragile the support of EU citizens was when it came to such a massive agreement like TTIP. For example, in Germany, the fear of lowering standards on consumer protection, food safety and genetically modified organisms and other sensitive issues, such as the Interstate Dispute settlement, was heightened by distrust of Germans towards the US (Chan, Crawford, 2017), although the negative attitude towards the TTIP negotiations was not only present in Germany. Garcia-Duran and Eliasson see the low knowledge of citizens about NTBs as a problem, but in the case of this FTA, the fact that it was the US as a partner played a significant role. (Garcia-Duran, Eliasson, 2017).

### **3. Problem Solution**

Despite low tariffs, regulatory barriers remain a challenge in the eventual further liberalization of bilateral trade. This in particular was the focus of trade talks on (Transatlantic Trade and Investment Partnership) TTIP, which started in 2013. However, the new approach toward trade policy that the new US administration has brought has shown that previous ambitions, such as joining TPP, are not priorities anymore. The “America First” commitment, which D. Trump promotes, has also affected trade talks with the EU. Griffith, Steinberg and Zysman (2017) argue that US position to TTIP means the loss of a key foreign policy tool in Europe. However, it's still unclear, what exactly will follow in terms of more concrete steps and measures that might be applied by the US towards the EU. The uncertainty and unpredictability of steps of the US administration therefore remain of the biggest threats.

For further deepening of the relations, also public support on the EU side is needed. The TTIP negotiations have shown, that lack of public support may be a critical for further progress in the trade talks and it may be a real risk for positive perception of the EU trade policy. On both sides of the Atlantic, the stakeholders need to continue on promoting their interests, so the economic and strategic incentives are understood by policy makers.

### **4. Conclusion**

The nature of transatlantic economic relations is very complex and can be characterized by deep roots that have evolved over decades. The transatlantic economy is, despite challenges particularly from emerging markets, the most integrated in the world. The relations are based on trade, but much more crucial are the FDI flowing in R&D and in general in the sectors with higher value added.

New US administration brought a new approach to the US trade policy. Protectionism and reformulating the US priorities in the global trade have resulted in abandoning the TPP, launching renegotiations the NAFTA and reconsiderations towards other regions and main trading partners too. In the EU-US relations, the trade talks on TTIP have been put on hold.

Despite the fact that the EU is one of the proponents of the free trade, the trade talks with the US has shown number of obstacles. Those can be identified in regulatory divergences, risk



management and other areas. Crucial issue is also opposition against the entire trade liberalization ambition in the EU. This illustrates that such a massive trade agreement needs a solid support not only among policy makers, but also in the society. From the US side, concerns can be seen about the eventual use of restrictive measures which may be implemented by the US administration towards other countries and could also eventually be imposed on the EU. The last statement of D. Trump proves that, the despite domestic criticism, imposing additional tariffs on steel and aluminium are not anymore only promises of the presidential campaign. (Reuters, 2017) This means that for the future, more realistic are trade conflicts rather than progress in complex trade liberalization in the transatlantic relations.

## References

- [1] Autor, D.H., Dorn, D., Hanson H.G. (2016). The China Shock: Learning from Labor-Market Adjustment to Large Changes in Trade. *Annual Review of Economics*, vol. 8, iss.1, pp. 205–240.
- [2] Bhagwati, N., J. (1995). US Trade Policy: The Infatuation with FTAs. *Discussion Paper Series No. 726*. New York: Columbia University Academic Commons. Available at: <https://academiccommons.columbia.edu/catalog/ac:100125>
- [3] Chan, A. T., Crawford, B.K. (2017). The puzzle of public opposition to TTIP in Germany. *Business and Politics*. Vol. 19. Iss. 4. pp. 683–708
- [4] Cooper, W.H. (2014). EU-U.S. Economic Ties: Framework, Scope and Magnitude. [online]. [cit.2018-03-08]. Available at: <https://fas.org/sgp/crs/row/RL30608.pdf>
- [5] Duran-Garcia, P., Eliasson, L. J. (2017) The Public Debate over Transatlantic Trade and Investment Partnership and Its Underlying Assumptions. *Journal of World Trade*, vol.51, iss. 1, pp. 23–42.
- [6] European Commission. (2016) *Client and Supplier Countries of the EU28 in Merchandise Trade*. [online]. [cit.2018-03-08]. Available at: [http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc\\_122530.pdf](http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_122530.pdf)
- [7] EUROSTAT (2017). *Foreign direct investment statistics*. [cit.2018-03-08]. Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Foreign\\_direct\\_investment\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Foreign_direct_investment_statistics)
- [8] Reuters. (2017). Trump threatens to tax European auto imports. 8.3. 2017. [cit.2018-03-08]. Available at: <https://www.reuters.com/article/us-usa-trade-autos/trump-threatens-to-tax-european-auto-imports-idUSKCN1GF0QJ>
- [9] Griffith, K.M., Steinberg, H. R., Zysman J. (2017). From great power politics to a strategic vacuum: Origins and consequences of the TPP and TTIP. *Business and Politics*. Vol. 19. Iss. 4., pp. 573–592
- [10] Grmelová, N. (2016). Interpretation of Precautionary Principle in Trade Disputes between the EU and the US. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 273– 280.
- [11] Hamilton, D.S, Quinlan, J. (2017). *Transatlantic Economy*. Washington DC: Centre for Transatlantic Relations, SAIS, Johns Hopkins University.
- [12] Kagan, R. (2003). *Of Paradise and Power: America and Europe in the New World Order*. New York: Alfred A. Knopf.

- [13] Kupchan, Ch. (2012) *No One's World: The West, the Rising Rest, and the Coming Global Turn*. New York: Oxford University Press.
- [14] Kupchan, Ch. (2015). Parsing TTIP's Geopolitical Implications. *Geopolitics, History, and International Relations*. Vol. 2. Pp. iss. 2, 124–133.
- [15] Meltzer, P., J. (2015). *The Trans-Pacific Partnership is a win for all parties* [online]. [cit.2018-03-08]. Available at: <https://www.brookings.edu/blog/future-development/2015/12/09/the-trans-pacific-partnership-is-a-win-for-all-parties/>
- [16] Schneider-Petsinger, M. (2017). *Trade Policy Under President Trump Implications for the US and the World* [online]. [cit.2018-03-08] Available at: <https://www.chathamhouse.org/publication/trade-policy-under-president-trump-implications-us-and-world>
- [17] USTR. (2017) Summary of objectives for the NAFTA renegotiation [online]. [cit.2018-03-08]. Available at: <https://ustr.gov/sites/default/files/files/Press/Releases/NAFTAObjectives.pdf>

## Language Skills of EU Citizens and their Participation on Foreign Cultural Products

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### **Abstract**

*Culture is an important aspect of European Union (EU) policy. It is a driving force for economic and social development, as well as innovation and cohesion. The main EU's cultural priorities are therefore to contribute to the development of the culture in the Member States, to encourage contemporary cultural production and to promote cultural cooperation and diffusion of culture across EU. Moreover, also the issue of cultural cohesion and multiculturalism is very topical in the contemporary, rapidly changing environment. Currently we are experiencing a number of manifestations of insufficient cultural integration in today's highly differentiated European societies. The paper deals with the issue of the participation of EU citizen on the foreign culture. The intention is to assess the attitude of EU citizens to foreign cultures. The expression of openness to foreign cultures can be demonstrated by the effort of citizens to learn foreign languages and to participate on foreign cultural products. The aim of the paper is therefore to evaluate the EU Member States in these areas, by usage of multi-criteria decision making methods. The results of the research are pointing out the differences among EU Member States, concerning the attitude of citizens to participate on foreign culture.*

**Keywords:** cultural participation, European member states, evaluation, language skills

**JEL Classification:** F68, H11, Z10, Z19

### **1. Introduction**

Culture is an important topic of the present time. As evidenced by UNESCO (2002) culture is at the heart of contemporary debates about identity, social cohesion, and the development of a knowledge-based economy. The international organizations (like UNESCO, OECD, Council of Europe) are affirming, that respect for the diversity of cultures, tolerance, dialogue and cooperation, in a climate of mutual trust and understanding, are among the best guarantees of international peace and security. Culture should be regarded as the set of distinctive spiritual, material, intellectual and emotional features of society or a social group, that encompasses, in addition to art and literature, also lifestyles, ways of living together, value systems, traditions and beliefs (UNESCO, 2002). Culture is becoming increasingly important also at EU level. In accordance with Article 167 of the Lisbon Treaty, “the EU shall contribute to the flowering of the cultures of the Member States, while respecting their national and regional diversity and at the same time bringing the common heritage to the fore”. Culture is an important element and determinant of many concepts and strategies, as evidenced by Ardielli (2016) in Good Governance concept evaluation in EU countries or Sustainable Development Assessment in Drastichová (2014).

As stated by Eurostat (2016a) culture is one of Europe's greatest strengths: "it is a source of values and identity and gives the continent a sense of belonging". It also contributes to people's well-being, to social cohesion and inclusion. The cultural and creative sectors are drivers of economic growth, job creation and external trade. In our increasingly diverse societies it is essential to ensure harmonious interaction among people and groups with plural, varied and dynamic cultural identities as well as their willingness to live together. Policies for the inclusion and participation of all citizens are therefore guarantees of social cohesion, the vitality of civil society and peace (UNESCO, 2002).

### ***1.1 Cultural Pluralism and Multiculturalism***

Cultural pluralism is a term used when smaller groups within a larger society maintain their unique cultural identities, and their values and practices are accepted by the wider culture. Cultural pluralism is distinct from multiculturalism (Nagle, 2009). Multiculturalism lacks the requirement of a dominant culture. If the dominant culture is weakened, societies can easily pass from cultural pluralism into multiculturalism without any intentional steps being taken by that society. If communities function separately from each other, or compete with one another, they are not considered culturally pluralistic (Pantoja, Perry and Blourock, 1976). Cultural pluralism seeks, on the one hand, the conditions and limits of peaceful coexistence of different cultures, but also examines the unexpected advantages of such cultural diversity. Historical and empirical studies show that culturally mixed society in the cities or in the border areas have been exceptionally productive (Kallen, 1997; Anghel, 1994). The task of cultural pluralism is therefore to explore and apply the conditions of fruitful communication among diverse cultural groups, to draw attention to the advantages and risks of culturally inhomogeneous societies and to promote cultural and intellectual exchanges between them. The basic conditions include knowledge of a common language, a fundamental recognition of the other, and finally the discovery of its potential importance and benefit to the majority society (Kallen, 1924). Multiculturalism is the school of thought and political stream, which is of the opinion that in a democratic state can live not only individuals but also groups with different cultures and highlights the benefits of cultural diversity for society and the state. It is applied in countries whose residents come from different cultural backgrounds and in some of them is also applied as a specific policy of the state. The aim is to unite politically all citizens, regardless of their origin, ethnicity or belief, so as to preserve their cultural differences if possible, as stated by Wayland (1997) or White (2001).

### ***1.2 Language Diversity in EU***

Language diversity across EU is great. In EU, there are 24 official languages. According to Council of Europe (2018) in their daily lives, Europeans increasingly come across foreign languages. There is therefore a need to generate a greater interest in languages among European citizens. Due to the influx of migrants and refugees, Europe has become largely multilingual. For example in London alone some 300 languages are spoken (Arabic, Turkish, Kurdish, Berber, Hindi, Punjabi, etc.). According to Eurostat (2018) that contains information on foreign language skills in EU, in many Member States, more than 9 out of 10 pupils in lower secondary education are studying two or more foreign languages. For example in Luxembourg it is 100 % of pupils, in Finland 98 %, in Greece 97 %, in Italy 96 %, in Estonia and Romania 95 %. The EU average is 59 %. In the Czech Republic 65 % of pupils are studying two or more foreign languages. The lowest share of pupils studying two or more foreign languages in EU Member States is in Ireland (13 %), Austria (9 %) and Hungary (6 %). Not surprisingly, English is by far the foreign language most studied in the EU. 97 % of

pupils studied English in lower secondary education in 2015, followed by French (34 %) and German (23 %). However, in some Member States English was not the main foreign language to be studied. This was the case in Belgium (French was the first foreign language), Ireland (French), Luxembourg (German).

### ***1.3 Cultural Participation in EU***

Cultural participation is an essential dimension of personal well-being and integration of individuals in society (Eurostat, 2016a). According to Council of Europe the right to take part in cultural life is - and shall be recognised as being - pivotal to the system of human rights (Compendium, 2017). Participation in cultural activities and on cultural products is a fundamental human behaviour and is promoting human well-being (Brook, 2011, Schuster, 2007). Wider participation in cultural life is a major concern of national cultural policies in different countries around the world (Compendium, 2017). Cultural practices can be defined according to three categories (Morrone, 2006): home-based (watching TV, listening to the radio, reading books and newspapers, watching and listening to recorded sound and images, reading and using computer and the Internet), going out (visits to cultural venues such as cinema, theatre, concerts, museums, monuments and heritage sites) and identity building (covers amateur cultural practices, membership of cultural associations, popular culture, ethnic culture, community practices and youth culture).

Nevertheless according to studies of European Commission from 2007 and 2013 (TNS Opinion & Social, 2013) the cultural participation is decreasing in the EU. For example the share of readers fell from 2007 to 2011 by 10 percentage points (the indicator Number of books read in the last 12 months), see Eurostat (2016b). Moreover the statistical data document the new trend on EU book market – increasing share of e-books and decreasing trend of printed books. Also going to the cinema and visiting live performances is significantly influenced by the entry of ICT. The main reasons to non-participation in cultural activities are according to Eurobarometr survey (TNS Opinion & Social, 2013) lack of interest, lack of time and expense. Also only small minorities of Europeans participate in cultural activities and on cultural products from another European country, and even fewer participate in activities in another EU country. The most commonly accessed activity is reading books by an author from another European country (31 % of Europeans have done so at least once in the last 12 months), followed by watching or listening to a cultural TV or radio programme from another European country (27 %). Fewer Europeans participate in cultural activities in another EU country: 19 % have visited a historical monument or site and 10 % have attended a live performance, exhibition or cultural activity.

## **2. Problem Formulation and Methodology**

The EU is diverse in cultural matters and Member States are different with diverse culture backgrounds. The paper is focused on the issue of participation of EU citizen on the foreign culture. The willingness of EU citizens to participate on foreign culture is evaluated based on the indicators describing the level of foreign languages knowledge and participation on foreign cultural products as the expression of openness to foreign culture.

As a cultural product, the art and cultural heritage and everything associated with it is referred to. For example, traditional arts (like writing, painting, sculpture and dance), theatre, museum, gallery, monument, exposition, individual exhibits and accompanying services, all of this, can be described as a cultural product (Johnová, 2009). Cultural product is also the output of

cultural-products industries (service outputs that focus on entertainment - motion pictures, recorded music and print media, etc.).

The aim of the paper is explicitly to evaluate the EU Member States citizens in the area of foreign language knowledge and participation on foreign cultural products by usage of multi-criteria decision making method MAPPAC.

## 2.1 Method

MAPPAC method is the example of MCDM methods based on the preference relation (Fiala, 2013; Brans, et al., 1984). The MAPPAC method was chosen because, apart from the information from the multi-criteria matrix and the vector of weights, does not need any additional information, such as threshold values or the choice of generalized criteria. The MAPPAC method is based on paired comparisons of variants, whereby each pair of individual criteria results in a decision on which of the two objects is the more important, or whether they are indistinguishable in terms of the selected criteria (Matarazzo, 1991). The MAPPAC method works with the criterion matrix and weights of the criteria. The method splits the variants into several preferential classes. MAPPAC method uses a normalized multi-criteria matrix  $C = (c_{ij})$ , where  $r$ -th row corresponds to variant  $a_r$  and  $s$ -th row corresponds to variant  $a_s$ . First the paired comparison of variants is processed (Martel and Matarazzo, 2005). On the basis of the results there are possible two relationships between variants. Either preference (variant  $a$  was rated better than variant  $b$ ) or indifference (variant  $a$  and variant  $b$  are assessed in the same way). In the last step preferences are aggregated, resulting in a final order. The row totals of the aggregated matrix  $\pi$  are calculated according to the equation (1):

$$\sigma^l(a_i) = \sum_{j=1}^p \pi(a_i, a_j), \quad i \in J^l \quad (1)$$

Variants with the highest  $\sigma^l$  values are placed on the first place in the ranking. The set of variants is reduced from these variants, new set of variants  $A^l$  is created, the set of indexes of variants from  $A^l$  are marked as  $J^l$ . The procedure is repeated for  $m$  steps where  $m$  is the number of preferential classes by the ranking from above. In a similar procedure is reached the value of  $\tau^1, \tau^2, \dots, \tau^n$ , where  $n$  is the number of preferential classes in the ranking from bottom, by usage of equation (2):

$$\tau^t(a_i) = \sum_{j \in J^t} \pi(a_j, a_i), \quad i \in J^t, \quad t = 1, 2, \dots, n. \quad (2)$$

The overall ranking of variants is reached by averaging of the serial numbers of variants by the ranking from above and bottom. As the best evaluated is the variant which has the lowest overall serial number.

## 2.2 Data

In this paper was performed the evaluation of language skills of EU citizens in individual Member States and evaluation of participation on foreign culture products. The evaluation of language skills was based on 7 indicators (criteria) available from the Eurostat database - Adult Education Survey (AES) (Eurostat, 2018). AES is a source of data on the knowledge of languages by the adult population (self-reported competencies). The survey focused on people aged 25–64 living in private households and the reference period was the 12-months prior to the respondent's interview. This unique dataset enabled the reliable analysis of foreign language knowledge, because it contains comparable data of all 28 EU Member States based on the results of questionnaire from the year 2016.

The evaluation of the cultural participation of EU citizens on foreign cultural products was carried out on the basis of 7 cultural indicators which were obtained in the framework of the Eurobarometr survey (TNS Opinion & Social 2013). The European Commission's Directorate-General for Education and Culture (DG EAC) commissioned this survey in an effort to measure the attitudes of the European public to individual cultural activities. The survey involved a total of 27,563 European citizens from all 28 EU countries. The last available data refer to the year 2013.

### 3. Problem Solution

Multi-criteria decision models show decision-making issues where the consequences of decisions are judged by multiple criteria. Multi-criteriality characterizes almost every decision-making situation. In these models of multi-criterial analysis of variants, a final set of variants is given, which is evaluated according to selected criteria. In the research, there was selected the final list of variants, which were 28 EU Member States and two sets of criteria. 7 criteria for evaluation of language skills (different weights for individual criteria – in total 0.5):

- Number of foreign languages known - no languages (weight 0.11842);
- number of foreign languages known – 1 language (weight 0.02632);
- number of foreign languages known - 2 languages (weight 0.06579);
- number of foreign languages known – 3 languages or more (weight 0.11842);
- level of the foreign language reported as best-known – proficient (weight 0.11842);
- level of the foreign language reported as best-known – good (weight 0.03948);
- level of the foreign language reported as best-known – basic (weight 0,01316);

and 7 criteria for evaluation of foreign cultural participation (the same weight 0,07142 for all criteria – in total 0,5):

- Visit of ballet, dance performance or opera from another EU country;
- visit of theatre performance from another EU country;
- visit of musical performance (concert, band, etc.) from another EU country;
- watching/listening to cultural programme on TV/radio from another EU country;
- reading a book by an author from another EU country;
- visit of historical monument/site (palaces, castles, etc.) in another EU country;
- attending live performance, festival or cultural activity in another EU country.

The input data were processed by MAPPAC method. The weights of selected criteria were established by usage of scoring method. These weighted values were used for the calculation by MAPPAC method.

The output of MAPPAC method is the arrangement of variants according to preferential classes. In Table 1, it is possible to see the variants in the order according to the rankings from the top (column Top) and from bottom (column Bot.) and the final ranking of EU Member States (column Range) according to the selected criteria. It is evident, that the first five places (Luxembourg, Sweden, Denmark, Netherlands, and Finland) are clearly given, because the countries are ranked in the same place as when ranking from top and also from bottom. It means that the citizens of these countries were evaluated as most skilled with knowledge of foreign languages and most interested in foreign cultures.

**Table 1: Ranking of EU Member States According to Participation on Foreign Culture**

Country	Top	Bot.	Range	Country	Top	Bot.	Range
Luxembourg	1	1	1.	Cyprus	15	16	15.
Sweden	2	2	2.	Czech Republic	17	17	16./17.
Denmark	3	3	3.	Ireland	19	15	16./17.
Netherlands	4	4	4.	Croatia	16	19	18.
Finland	5	6	5.	France	18	18	19.
Austria	6	7	6./7.	Hungary	21	20	20.
Malta	8	5	6./7.	United King.	22	21	21.
Slovakia	7	8	8.	Spain	20	24	22.
Belgium	9	9	9.	Portugal	24	22	23.
Estonia	11	12	10.	Greece	25	23	24./25.
Germany	10	14	11./12./13.	Italy	23	25	24./25.
Latvia	14	10	11./12./13.	Bulgaria	27	26	26./27.
Slovenia	13	11	11./12./13.	Poland	26	27	26./27.
Lithuania	12	13	14.	Romania	28	28	28.

Source: author's calculations, Eurostat (2018), TNS Opinion & Social (2013).

The next two variants (Austria and Malta) are placed in the same preferential class. Average serial numbers of these variants are the same. These two countries are placed on the 6. and 7. position together. For the 8.- 10. place the rank is clearly given – they are Slovakia, Belgium, Estonia. Germany, Latvia and Slovenia are placed in the same preferential class again. It means that these three countries are placed together on the 11., 12. and 13. position. The Czech Republic ranked on the 16. and 17. position together with Ireland. On the worst positions ranked Greece together with Italy (24./25.), Bulgaria and Poland (together on position 26./27.) and Romania (28. position). It means that the level of language skills and participation on foreign cultural products is in these countries the lowest across EU.

#### 4. Conclusion

Cultural, religious and linguistic diversity are, at first glance, obstacles to communication and clearly complicate social life. But closer study reveals that if these diverse segments of society learn to communicate, it brings unexpected benefits to the majority and minorities. Conversely, if the different cultures only live side by side, avoiding contacts and simply "tolerate" themselves, this represent a certain danger that in a crisis can erupt in violence.

The paper was focused on the evaluation of EU Member States according to the citizens' attitude to the knowledge of foreign languages and consumption of foreign culture products. The EU Member States were ranked based on 14 selected criteria by usage of MCDM method MAPPAC. It was confirmed the diversity across EU Member States in terms of willingness of citizens to participate on foreign culture. The most inclined to use foreign languages and to consume foreign culture products are the Luxembourgers, Swedes, Danish, Dutchmen and Finns. On the other hand the Greeks, Italians, Bulgarians, Poles and Romanians are less keen to get known foreign languages and cultures. The Europe is facing the process of globalization that involves mixing of different cultures. The trend of current time is also the rapid development of new Information and communication technologies. This all is representing a challenge for cultural diversity and creates the conditions for renewed dialogue among cultures and civilizations.



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## References

- [1] Anghel, F. (1994). Adult Education, Democracy and Development. Workshop IV - Cultural Pluralism, Minorities and Migration: How can we learn to experience together the cultural diversity? *CORDEE Newsletter*. vol. 2, pp. 17-20.
- [2] Ardielli, E. (2016). Implementation of Good Governance Concept in the European Union Member Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 28–36.
- [3] Brans, J.-P., Mareschal, B., Vincke, P. (1984). PROMETHEE: a new family of outranking methods in multicriteria analysis. In *Operational Research' 84*. Amsterdam: Elsevier, pp. 477–490.
- [4] Brook, O (2011). *International comparisons of public engagement in culture and sport*. London: DCMS. [online]. [cit.2017-12-19]. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/77843/Int\\_comparisons\\_public\\_participation\\_in\\_culture\\_and\\_sport-Aug2011.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/77843/Int_comparisons_public_participation_in_culture_and_sport-Aug2011.pdf).
- [5] Brown, N. (2001). *Friedrich Ratzel, Clark Wissler, and Carl Sauer Culture Area Research and Mapping*. CSISS Classics. UC Santa Barbara: Center for Spatially Integrated Social Science.
- [6] Butkus, M., Matuzevičiūtė, K. (2016). Evaluation of EU Cohesion Policy Impact on Regional Convergence: Do Culture Differences Matter? *Economics and Culture*, vol. 13, iss. 1, pp. 41-52. DOI: 10.1515/jec-2016-0005.
- [7] Compendium (2017). *Compendium of Cultural Policies and Trends in Europe*. [online]. [cit.2018-02-02]. Available at: <http://www.culturalpolicies.net/web/cultural-participation.php>.
- [8] Council of Europe (2018). [online]. [cit.2018-02-12]. Available at: <https://edl.ecml.at/LanguageFun/LanguageFacts/tabid/1859/language/en-GB/Default.aspx>
- [9] Drastichová, M. (2014). *Measuring Sustainable Development in the European Union Using the Adjusted Net Saving*. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 87–101.
- [10] Eurostat (2016a). *Culture statistics* [online]. [cit.2018-02-22]. Available at: <http://ec.europa.eu/eurostat/documents/3217494/7551543/KS-04-15-737-EN-N.pdf>
- [11] Eurostat (2016b). *Digital economy and society statistics - households and individuals*. [online]. [cit.2018-02-10]. Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Digital\\_economy\\_and\\_society\\_statistics\\_-\\_households\\_and\\_individuals#Internet\\_access](http://ec.europa.eu/eurostat/statistics-explained/index.php/Digital_economy_and_society_statistics_-_households_and_individuals#Internet_access).
- [12] Eurostat (2018). *Statistics on Education* [online]. [cit.2018-02-12]. Available at: <http://ec.europa.eu/eurostat/web/products-eurostat-news/-/WDN-20170223->

- 1?inheritRedirect=true&redirect=%2Feurostat%2Fweb%2Feducation-and-training%2Fpublications
- [13] Fiala, P. (2013). *Modely a metody rozhodování*. Praha: Oeconomica
- [14] Johnová, R., et al.. (2009). *Arts Marketing, Marketing umění a kulturního dědictví*. Praha: Oeconomica.
- [15] Kallen, H.M. (1924). *Culture and Democracy in the United States*. New York: Boni Liveright.
- [16] Kallen, H.M. (1997). Pluralism and American Jewish Identity. *American Jewish History*, vol. 85, iss. 1, pp. 57-74. DOI: 10.1353/ajh.1997.0007.
- [17] Matarazzo, B. (1991). MAPPAC as a compromise between outranking methods and MAUT. *European Journal of Operational Research*, vol. 54, iss. 1, pp. 48–65.
- [18] Martel J.M., Matarazzo B. (2005). Multiple Criteria Decision Analysis: State of The Art Surveys. *International Series in Operations Research and Management Science*, vol. 78, iss. 3, pp.197-259.
- [19] Morrone, A. (2006). *Guidelines for Measuring Cultural Participation*. Quebec: UNESCO Institute for Statistics. [online]. [cit.2018-02-19]. Available at: <http://uis.unesco.org/sites/default/files/documents/guidelines-for-measuring-cultural-participation-2006-en.pdf>.
- [20] Nagle, J. (2009). *Multiculturalism's double bind: creating inclusivity, cosmopolitanism and difference*. Farnham: Ashgate Publishing, Ltd.
- [21] Pantoja, A., Perry, W., Blourock, B. (1976). Towards the Development of Theory: Cultural Pluralism Redefined. *The Journal of Sociology & Social Welfare*, vol. 4, iss. 1, pp. 125-146.
- [22] Schuster, J. M. (2007). Participation Studies and Cross-National Comparison: Proliferation, Prudence, and Possibility. *Cultural Trends*, vol. 16, iss. 2, pp. 99 – 196.
- [23] Schwartz, S.H. (2014). National Culture as Value Orientations: Consequences of Value Differences and Cultural Distance. In Ginsburgh, V. and Throsby, D. (eds.). *Handbook of the economic arts and culture*, 2. North Holland: Elsevier.
- [24] TNS Opinion & Social (2013). *Cultural Access and Participation. Special Eurobarometer 399*. Brussels: European Commission [online]. [cit.2018-02-19]. Available at: [http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs\\_399\\_en.pdf](http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_399_en.pdf).
- [25] UNESCSO (2002). *Universal Declaration on Cultural Diversity*. [online]. [cit.2018-02-09]. Available at: <http://unesdoc.unesco.org/images/0012/001271/127162e.pdf>.
- [26] Wayland, S. (1997). Immigration, Multiculturalism and National Identity in Canada. *International Journal of Minority and Group Rights*, vol. 5, iss. 1. pp. 33–58. DOI:10.1163/15718119720907408.
- [27] White, R., Perrone, S. (2001). Racism, Ethnicity and Hate Crime. *Communal/Plural*, vol. 9, iss. 2, pp. 161–81. DOI:10.1080/13207870120081479.

## European Union's Relations with Iceland, Norway and Switzerland – Current State and Future Perspectives

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### **Abstract**

*The main goal of the article will be the analysis of relations between the European Union and three member states of the European Free Trade Association (EFTA): Iceland, Norway and Switzerland (in the context of their possible accession to the EU as well). The analysis will be performed in two areas: the contractual one (state of conventional relations) and economic one (values of economic indicators). The contractual part of the analysis will cover the period from year 1960 (establishment of EFTA) to year 2018 (present situation). The economic part of the analysis will utilize four variables: GDP, GDP per capita, value of trade in goods, and composition of trade in goods. In order to identify dynamic changes in variables, values for two years will be analyzed: 2005 and 2016.*

**Keywords:** *European Union's external relations, Iceland, Norway, Switzerland*

**JEL Classification:** *F15, F21, O19*

### **1. Introduction**

The main object of interest for scientists analyzing the phenomenon of European integration is, in most cases, the European Union. This comes from the fact, that the EU is the most important integrational grouping of the European continent and, at the same time, the most advanced one in the world. However, political and economic integration in Europe applies also to the countries that are not members of the EU. In this respect, the countries that – due to some reasons – decided not to become Member States of the European Union, even though the EU was interested in granting them full membership, are especially important. Three<sup>3</sup> highly-developed European countries: Iceland, Norway and Switzerland are not members of the European Union. These countries constitute three of four remaining members of the European Free Trade Association (EFTA), an integrational organization, which was in the past a sort of competitor to the European Economic Community. For European integration, the relevant issues are not so much the contractual and economic relations between these countries (limited in scope), but relations of these countries (in both mentioned aspects) with the European Union (which are highly-developed).

**The main goal** of this article is the analysis of relations between European Union and three members of EFTA (Iceland, Norway and Switzerland) in two aspects: contractual and economic. The outcomes of this analysis were used to formulate an opinion regarding

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<sup>3</sup> Lichtenstein was omitted in the analysis – see below.

perspectives for future development of these relations (either their tightening or loosening), also taking into consideration the possibility of these countries' full accession into the EU.

**Subjective scope** of the article covers two aspects: current state of contractual relations between each EFTA country and the EU and present state of mutual economic relations, measured with values of selected empirical indicators. The list of indicators used in the analysis has been presented below.

**Objective scope** of the article covers three EFTA countries: Iceland, Norway and Switzerland. Lichtenstein has been omitted in the analysis due to: small size of its economy, small population (below 40.000 people), strong economic bonds with Switzerland (customs union, usage of Swiss currency) and also the lack of data regarding this country for the majority of indicators used in the analysis.

**Temporal scope** of the analysis covers years 1960-2017 in the contractual aspect and years 2005-2016 in the economic aspect. The "current" state of contractual relations was defined as the state from January 1<sup>st</sup>, 2018. The analysis of empirical indicators' values was performed for two separate years: 2005 and 2016, with the purpose of identifying dynamic changes. Year 2016 was chosen due to the fact that in case of the majority of indicators used in analysis, it was the last year, for which the values were available. In consequence, year 2005 was chosen as the base year of the analysis.

## 2. Relations Between EU and EFTA Countries – Contractual Aspect

The thing that all three analyzed countries: Iceland, Norway and Switzerland have in common, is not only the EFTA membership, but also the history of relations with European Communities (see: Flam, 1995; Haaland and Norman, 1995; EFTA Secretariat 2018). All these countries did not participate in the process of European Communities' creation in the 1950s, but instead, especially during the 1960s, focused on intergovernmental integration dealing exclusively with trade, within the framework of EFTA. The event of United Kingdom and Denmark leaving EFTA and joining the ECs in 1973 was an impulse for the remaining EFTA countries to tighten their relations with the Communities. It took the form of signing association agreements. In 1972, all EFTA members signed the so-called *Free Trade Agreements* (FTAs) with European Communities. Main component of these agreements provided an establishment of free trade area concerning industrial goods between the European Economic Community and each EFTA country. The subjective scope of these agreements had been later widened via so-called "evolutionary clauses". During the turn of 1980s and 1990s, all three analyzed countries engaged in talks with the ECs, concerning the possibility of their involvement in the creation of European Single Market (ESM). The outcome of these talks was establishment of the European Economic Area (EEA). The EEA Agreement has been signed in the 1992 by four EFTA countries: Iceland, Lichtenstein, Norway and Switzerland. In regard to the first three countries, the agreement came into force on January 1<sup>st</sup>, 1994, whereas Switzerland ultimately decided not to ratify the agreement (see below). The remaining three EFTA member countries: Austria, Finland and Sweden, left EFTA in 1995, joining European Union as regular members. The body of the EEA Agreement included a solution, disadvantageous from the perspective of the EEA-EFTA countries', establishing a mechanism of unidirectional implementation of EU's regulations into the legislative systems of these countries (they do not have the right to vote in the process of these regulations' creation). However, such solution ensures efficient functioning of the EEA: the decision about implementing new regulations into the Agreement is made by the EEA Joint Committee, while EEA-EFTA states only carry out technical implementation of these regulations (states cannot block or modify these regulations on their own). The lack of such mechanism has a negative

influence on relations between the EU and the only EFTA state, which decided not to join the EEA, that is Switzerland (see below).

Iceland became an EFTA member ten years after its establishment, that is in 1970. Since 1973, trade between this country and EEC (from 1993 – EU) has been regulated by the FTA (free trade area regulations apply only to industrial goods). Since 1994 Iceland is a member of EEA, and since 2001 member of the Schengen Area. In 2009, facing a serious financial and economic crisis, which hit the country at the time, Iceland for the first time in its history applied for a EU membership. Negotiations started in 2010, but after a negative result of a referendum, concerning the method of debt payment for a bankrupt Icelandic bank (“Icesave referendum”), accession process was put on hold (see: Mišik, 2008; Frankowski, 2011; EEAS, 2018; European Commission, 2018).

Norway is a founding member of EFTA (1960). Starting from 1973, Norway’s trade relations with EEC (from 1993 with EU) were controlled by the FTA (covering only industrial goods). Since 1994 Norway is a member of EEA and since 2001, member of Schengen Area. Norway is a country that unsuccessfully tried to join the ECs / EU four times, namely in years: 1962, 1967 (no approval for starting the negotiations on ECs’ side), 1970 and 1992 (negative results of accession referendums) (see: EEAS, 2018; European Commission, 2018).

Switzerland is another founding member of EFTA (1960). The FTA between this country and EEC came into force in 1973. Till the beginning of 1990s, contractual relations between both partners have been regulated by this agreement (plus “evolutionary clauses”). However, Switzerland was among the first external partners of ECs, who took the perspective of creating the European Single Market very seriously. In 1986, Swiss government introduced a special rule on federal level, stating that all legal acts introduced in the country should be checked beforehand in regard with their accordance to the law of ECs. At the beginning of the 1990s Switzerland, similarly to other EFTA countries, engaged in negotiations concerning the establishment of EEA, and in May 1992 officially applied for full EU membership (see: DEA, 2018; EEAS, 2018; European Commission, 2018). However, in December 1992, the country was forced to withdraw an application after a negative outcome of referendum regarding Swiss membership in the EEA (Christin and Trechsel, 2002). Thus, Switzerland became the only EFTA member not participating in the EEA, which compelled the country to look for other legal solutions, that would enable its participation in the ESM. These solutions took the form of special agreements with European Union, which have been negotiated since 1998. The first package of seven bilateral agreements (so-called Bilateral 1) came into force in 2002 and applied to (i. a.): free movement of persons, technical barriers to trade, public procurement and transport. In these areas Switzerland adopted de facto the EU’s regulations. In appliance to the whole package of agreements, a special “guillotine clause” has been introduced. This clause states, that even if only one agreement from the package has been denounced by any party, the whole package becomes terminated. Such solution was supposed to guarantee a comprehensive treatment of the agreements’ package, which regulates selected areas of European Single Market. On the other hand, it can negatively influence future relations between EU and Switzerland (see below). In 2005, the second package of agreements (Bilateral 2) came into force, which applied to (i. a.): Swiss association with the Schengen-Dublin system, taxation of savings and fight against fraud. The guillotine clause has been applied only to the first agreement (Schengen-Dublin), which is thus treated as the eighth agreement of the first package. Switzerland became a member of the Schengen Area in 2008. Between 2004 and 2014 Switzerland has negotiated another seven separate agreements with EU, which relate not only to the area of ESM, but also to the areas of Justice and Home Affairs or Foreign and Security Policy.

As opposed to the case of Iceland and Norway, in case of Swiss relations with the EU, there are already specific issues, which can possibly harm these relations in the future. The first one is the character of these relations itself, which is based on successively negotiated bilateral agreements, without a regular institutional and legal mechanism that would be responsible for transposition of EU's law into the Swiss legislation (such mechanism is present within the frame of EEA). In 2012, European Council has announced that no further agreements with Switzerland will be negotiated, until a "new legal framework" (similar to the one existing within EEA) is implemented in bilateral relations. Unfortunately, in following years some events put the future of EU-Switzerland relations at stake. In 2014 Swiss citizens approved via referendum a new law, which envisioned an implementation of yearly immigration quotas for EU citizens wanting to work in Switzerland, and special preferences for Swiss citizens in employment. European Commission regarded both measures as being in total conflict with base rules of the ESM (free movement of persons) and threatened to use the "guillotine clause" in case of such law coming into force. Later, the EU also decided to exclude Swiss entities from EU's Horizon and Erasmus programmes (Mitchell, 2017). In December 2016, the federal government of Switzerland introduced regulations, which were meant to carry out the outcomes of the 2014 referendum. These regulations however turned out to be much more liberal than the provisions introduced in the original bill (BBC, 2016). In February 2017, Swiss citizens rejected in a referendum the last bilateral agreement with the EU (concerning company taxation laws). The abovementioned facts, but also other factors, both internal (specific political system of Switzerland) and external (immigration crisis) can lead to a conclusion, that in case of Switzerland the probability of loosening relations with the EU seems higher than the probability of an opposite process.

### 3. Relations Between EU and EFTA Countries – Economic Aspect

The analysis of relations between the EU and the three EFTA countries in the economic aspect will be based on four indicators: value of GDP, value of GDP *per capita*, value of trade in goods and geographical pattern of trade in goods.

In Table 1 below, values of first two indicators have been presented, both in absolute and relative dimensions: GDP (USD millions & % of combined GDP of EU-28) and GDP *per capita* (USD thousands & % of mean GDP *per capita* of EU-28).

**Table 1: GDP and GDP per Capita of Iceland, Norway, Switzerland and EU-28**

Entity	2005				2015			
	GDP		GDP/Cap		GDP		GDP/Cap	
	bln USD	% EU	ths USD	% EU	bln USD	% EU	ths USD	% EU
Iceland	16.7	0.12	55.7	211.3	16.8	0.10	50.5	166.0
Norway	308.7	2.14	66.6	253.0	386.6	2.37	74.3	244.3
Switzerland	407.6	2.82	55.0	208.7	670.7	4.11	81.4	267.8
EU-28	14 431	100	26.3	100	16 326	100	30.4	100

Source: Author, based on (IMF, 2017a); current prices, 2016 data weren't available

The economy of Iceland was much smaller than economies of other two EFTA countries in both analyzed years. GDP of Iceland did not exceed 17 bln USD (less than 0,1% of EU's GDP). Norwegian economy was much bigger (over 300 bln USD), equaling more than 2% of

EU's GDP. Definitely the biggest (and also the fastest growing) was the economy of Switzerland. The value of Swiss GDP in 2005 equaled almost 3% of EU's GDP, while in 2015 it was over 4%. If Switzerland was a member of the EU, in 2015 its economy would have been the seventh biggest economy in the organization.

The analysis of countries' economic development levels leads to different conclusions. In 2005, the most developed country of the group was Norway, with level of GDP *per capita* exceeding 250% of EU's mean. For both remaining countries, these levels were lower and similar (~210% of EU's mean). However, in 2015, the most developed country of the analyzed group was Switzerland, whose level of GDP *per capita* was close to 270% of EU's mean. Value for Norway was lower, slightly exceeding 240% of EU's mean. In case of Iceland, a visible, negative impact of the 2008-2010 crisis on country's economy could have been identified. The value of GDP *per capita* for this country in 2015 equaled only around 170% of EU's mean. Iceland was thus the only analyzed country, whose level of GDP *per capita* decreased in both absolute and relative dimension in analyzed period.

Table 2 below presents values of trade in goods between three analyzed countries and the EU in two dimensions: absolute (USD billions) and relative (share of EU in trade).

**Table 2: Exports (FOB) and Imports (CIF) of Iceland, Norway, Switzerland and EU-28**

Entity	2005				2016			
	Export to EU		Import from EU		Export to EU		Import from EU	
	bln USD	% Ex	bln USD	% Im	bln USD	% Ex	bln USD	% Im
Iceland	2.3	76.5	3.0	62.4	3.3	73.2	3.0	52.4
Norway	83.9	80.8	38.6	69.6	69.7	79.3	45.3	63.5
Switzerland	82.5	63.0	101.5	80.2	147.5	48.4	150.7	56.1
EU-28	2 762	67.7	2 658	64.0	3 437	63.9	3 356	63.9

Source: Author, based on (IMF, 2017b); current prices

For all three analyzed EFTA countries, EU was the most important trade partner. However, trade between these countries and EU has undergone some serious changes during the analyzed period. In 2005, the EU's share in the trade of all these countries exceeded 60% (in both directions). However, in 2016, only in case of Norway these shares were at similar levels (over 80% of export and around 65% of import, with sizeable surplus on Norway's side). In case of Iceland, EU's share in export did not change significantly (it remained around 75%), while the share in import decreased from 62% to 52%. These changes led to a significant change in balance sheet of Icelandic trade with EU: from deficit in 2005 to surplus in 2016. Even bigger changes (both in absolute and relative dimensions) occurred for Switzerland. This country, during analyzed period, has significantly increased the value of its trade with EU. That however, coincided with a decrease of the EU's share in Swiss trade: from 63% to 48% in case of export, and from 80% to 56% in case of import. In both analyzed years, Switzerland has noted a surplus in trade with EU.

In Table 3 below, geographical pattern of trade in goods between the three analyzed EFTA countries and the EU has been presented.

**Table 3: Geographical Pattern of Trade in Goods Between Iceland, Norway, Switzerland And EU (SITC Groups\*), in %**

SITC		0	1	2	3	4	5	6	7	8	9
Export to EU											
Iceland	2005	60.3	0.1	1.7	0.1	1.0	3.8	25.0	5.2	1.9	0.8
	2016	39.4	0.1	1.8	0.1	0.7	2.3	42.4	5.0	1.7	0.5
Norway	2005	3.8	0.0	1.8	60.2	0.1	3.9	9.6	6.2	1.9	0.3
	2016	10.7	0.1	2.4	48.8	0.2	5.0	9.3	5.6	1.8	0.5
Switzerland	2005	2.3	0.2	1.3	2.8	0.0	32.1	12.5	27.0	17.8	3.9
	2016	3.1	0.5	1.0	0.5	0.0	34.4	7.8	16.0	16.8	19.7
Import from EU											
Iceland	2005	5.5	1.0	2.2	11.2	0.2	9.2	15.3	40.2	13.6	0.6
	2016	7.9	1.4	2.0	2.3	0.3	9.8	11.4	53.6	9.9	0.6
Norway	2005	4.1	0.8	2.8	5.0	0.4	9.8	17.0	43.2	14.6	0.7
	2016	6.3	1.8	2.8	4.3	0.9	10.3	14.6	41.4	14.9	1.1
Switzerland	2005	3.2	1.1	1.5	5.1	0.1	19.0	14.1	30.6	16.8	7.0
	2016	3.9	1.2	1.2	3.4	0.1	21.5	11.9	24.1	19.0	13.0

\* Explanation of SITC groups: 0 – food and live animals, 1 – beverages and tobacco, 2 – crude materials, inedible, except fuels, 3 – mineral fuels, lubricants and related materials, 4 – animal and vegetable oils, fats and waxes, 5 – chemicals and related products, 6 – manufactured goods classified chiefly by material, 7 – machinery and transport equipment, 8 – miscellaneous manufactured articles, 9 – commodities and transactions not classified elsewhere

Source: Author, based on (Eurostat, 2018)

The pattern of trade in goods between the three EFTA countries and the EU did not change significantly in the analyzed period. In Iceland's export to the EU two groups have had the biggest share: 0 (fishery is one of the most important branches of the economy) and 6 (the country is an important producer of aluminum, thanks to cheap electric energy from geothermal sources). A thing worth mentioning is a visible decrease in the share of articles from group 0 in Icelandic export to EU between analyzed years, combined with a considerable increase in the share of articles from group 6. In Icelandic import from the EU, one group has had constantly the biggest share: machinery and transport equipment (group 7). In case of Norway, export to the EU was dominated by so-called "energetic products" (mineral fuels and their derivatives), and import from the EU – similarly as in Iceland – by machinery and transport equipment (group 7). The trade in goods between Switzerland and the EU however has had quite different pattern than in case of other two countries. For both directions of trade, groups with the biggest share were: chemicals (group 5), machinery and transport equipment (7), and miscellaneous manufactured articles (8). This fact can be used as a proof of generally intra-industrial character of trade between Switzerland and European Union.

#### 4. Conclusion

The analysis performed above, allows to draw some conclusions about current state of relations between European Union and three analyzed EFTA countries, as well as formulating an opinion about the future of these relations.



In relations between EU and Iceland, the most important factor appears to be a modest demographic and economic potential of the latter partner. Iceland is a small country, with economy dependant on export of only a few goods (fish, aluminum) and tourism<sup>4</sup>. Iceland was the only EFTA country, which reported a decrease in GDP *per capita* in the analyzed period. Country's authorities declare the will of leaving behind the old model of development, based on an (excessive) expansion of financial sector, which was considered as the most important factor responsible for the outburst of the 2008-2011 economic crisis (Dvoroková, 2014). However, analyzed data indicate that economic relations between Iceland and EU countries are somehow atypical in analyzed group, as evidenced by the exceptionally high shares of two SITC groups in Iceland's export to the EU: 0 (food) and 6 (low-processed industrial goods). In the event of another serious economic crisis, Iceland may be (again) forced to reconsider full accession to the European Union (and especially the Euro Zone). At the moment, two main factors hampering such potential process can be mentioned: the unwillingness to part with some of country's sovereignty, which is being reinforced by influential local economic and political groups, opposing the accession (Frankowski, 2011).

The most crucial issue in Norway-EU relations seems to be the dominant role of energy raw materials in Norwegian export to the EU and Norwegian economy. In the event of depletion of these raw materials' deposits, Norway will most likely be forced to reorient its economy into production of advanced, complex and internationally competitive goods and services. If not, maintaining the current, very high level of economic development and quality of life, which in most cases is connected to high price levels for the majority of goods (especially food), most likely will not be possible. The retention of high prices in Norway is in some part caused by the lack of full freedom in movement of agricultural and fishery products between Norway and EU. The inevitable changes, forced upon the Norwegian economy and society by depletion of energy raw materials, can possibly be mitigated in the event of acquiring full membership in the European Union. Such scenario would be even more probable, if the majority of European funds were redirected from "traditional" areas (common agriculture policy, supporting of less-developed regions) to the "modern" ones (industrial policy, new technologies, knowledge-based economy). According to many authors, such changes in European funds are inevitable in the near future.

Relations between the EU and the last analyzed EFTA country – Switzerland – are not only the most complex and interesting ones, but also the ones with the most worrisome looking future. Economic connections between both partners are very strong, but huge size and high level of development characterizing Swiss economy can lead to a conclusion, that further tightening of contractual relations with the EU does not necessarily have to be the priority for Switzerland in the future. However, the most important issue in bilateral relations seems to be the specificity of Swiss form of government and legal system (direct democracy, broad competences of regions), which is probably the main reason for special model of contractual relations between EU and Switzerland. This model is based on packages of agreements, which can be renounced in the event of a crisis in bilateral relations. Functioning of this model is already in a crisis, mostly on account of issues, which negatively affect intra-EU relations as well (free movement of persons, immigration crisis).

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<sup>4</sup> In 2015, Iceland had been visited by over 260 thousands of foreign tourists (having only around 330 thousands of citizens). The income from tourism amounted to about a third of the whole income from export of services (Icelandic Tourist Board, 2017).

## References

- [1] BBC (2016). *No quotas in 'compromise' Swiss immigration bill* [online]. [cit.2018-02-01]. Available at: <http://www.bbc.com/news/world-europe-38340407>.
- [2] Christin, T. and Trechsel, A. H. (2002). Joining the EU? Explaining Public Opinion in Switzerland. *European Union Politics*, vol. 3, iss. 4, pp. 415-433.
- [3] DEA (2018). *Directorate for European Affairs – Bilateral Agreements* [online]. [cit.2018-02-01]. Available at: <https://www.eda.admin.ch/dea/en/home/bilaterale-abkommen.html>.
- [4] Dvoroková, K. (2014). Impact of Economic Crisis on the International Monetary System. In: *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 110–118.
- [5] EEAS (2018). *EU in the World – Delegations* [online]. [cit.2018-02-01]. Available at: [https://eeas.europa.eu/headquarters/headquarters-homepage/area/geo\\_en](https://eeas.europa.eu/headquarters/headquarters-homepage/area/geo_en).
- [6] EFTA Secretariat (2018). *EFTA – Policy Areas* [online]. [cit.2018-02-01]. Available at: <http://www.efta.int/eea/policy-areas>.
- [7] European Commission (2018). *Trade – Policy – Countries and Regions* [online]. [cit.2018-02-01]. Available at: <http://ec.europa.eu/trade/policy/countries-and-regions/>.
- [8] Eurostat (2017). *Easy Comext* [online]. [cit.2018-02-01]. Available at: <http://epp.eurostat.ec.europa.eu/newxtweb/>.
- [9] Flam, H. (1995). From EEA to EU: Economic consequences for the EFTA countries. *European Economic Review*, vol. 39, iss. 3-4, pp. 457-466.
- [10] Frankowski, P. (2011). Perspektywy członkostwa Islandii w Unii Europejskiej. *Wspólnoty Europejskie*, vol. 207, iss. 2.
- [11] Haaland, J. I. and Norman, V. D. (1995). Regional Effects of European Integration. In: Baldwin, R. E., Haaparanta, P. and Kiander, J. (eds.). *Expanding Membership of the European Union*. Cambridge, Cambridge University Press, pp. 193-207.
- [12] Icelandic Tourist Board (2017). *Tourism in Iceland in Figures* [online]. [cit.2018-02-01]. Available at: <https://www.ferdamalastofa.is/en/research-and-statistics/tourism-in-iceland-in-figures>.
- [13] IMF (2017a). *World Economic Outlook Database* [online]. [cit.2018-02-01]. Available at: <http://www.imf.org/external/pubs/ft/weo/2017/01/weodata/weoselgr.aspx>.
- [14] IMF (2017b). *Direction of Trade Statistics* [online]. [cit.2018-02-01]. Available at: <http://stats.ukdataservice.ac.uk/Index.aspx?DataSetCode=DOTS>.
- [15] Mišik, M. (2008). Fish vs. National Identity: Iceland and the EU from Constructivist Point of View. *Sociológia*, vol. 40, no. 4, pp. 299-325.
- [16] Mitchell, N. (2017). *EU considers bringing Switzerland in from Erasmus+ cold* [online]. [cit.2018-02-01]. Available at: <https://thepienews.com/news/eu-considers-bringing-switzerland-in-from-erasmus-cold/>.

## Support of CCI in Slovakia and EU

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### **Abstract**

*The paper deals with the problematic of cultural and creative industries (CCI) in Slovakia and EU. It describes current decentralized support of CCI and compares current situation to the previous programs. It analyses the centralized support on EU level and evaluate the goals that have been (or should have been) reached on national level since the creation of first supportive policies. Paper also analyses the new decentralized form of the support for entrepreneurs and offers a critical view on the status comparing to other European countries. In the end, it tries to reveal basic weaknesses and possible solutions for improvement. Although there's no specific policy to support CCI on supranational level, we strongly believe EU could create a basic framework, which could be helpful mainly for the member states, which are "new" in the process of creating CCI supportive policies.*

**Keywords:** cultural and creative industries, EU, IROP, Slovakia

**JEL Classification:** Z10, Z11, Z18

### **1. Introduction**

The term creative industries firstly appeared in Europe in the 90's in United Kingdom. The Department of Culture, Media and Sport in the UK did the complex mapping and created the concept of creative industries. UK was the first European country that adopted the policy for supporting the development of creative industries. In the 2010, the importance of creative industries was finally recognized by the EU with adoption of Green paper on Unlocking the potential of cultural and creative industries.

The changes in the support of cultural and creative industries (CCI) in Slovakia started about ten years ago. With the creation of the first policy papers, there was a belief that CCI will be recognized and supported on the national level. Some documents and studies were written, however, they only represented basic theoretical knowledge of some other EU states. The most important one – Action plan, was adopted only in 2015. Action plan represented 4 selected priorities to develop CCI in Slovakia – Effective system for management development, Quality of human resources, Increasing the absorption capacity of the market and Supporting instruments for funding. Theory should be implemented in the practise via IROP axis 3. The first call for non-repayable funds was announced in 2016. The projects are in the phase of evaluation, however, it is now quite clear, that many of them will be rejected. It seems now, that the call was not set properly. However, second call is about to be announced. Besides decentralized support for the entrepreneurs, Ministry of Culture prepared the call for the self-governing regions to build up creative centres. The centralized support should go hand-in-hand with the decentralized call. But what will be achieved in reality?

The support of CCI in Slovakia is based on the policies of the EU. Year 2010 was an important milestone in the process of recognition of CCI in the EU policies. EU adopted Green paper on Unlocking the potential of CCI (EC, 2010). Document states *“In order to be able to fully unleash their dual cultural and economic potential, taking full advantage of the abovementioned drivers, CCIs need an increased capacity for experimenting and innovating, access to the right mix of skills and access to funding.”* (EC, 2010). The paper strictly defines both terms – cultural industries and creative industries. Cultural industries are *“those industries producing and distributing goods or services which at the time they are developed are considered to have a specific attribute, use or purpose which embodies or conveys cultural expressions, irrespective of the commercial value they may have. Besides the traditional arts sectors (performing arts, visual arts, cultural heritage – including the public sector), they include film, DVD and video, television and radio, video games, new media, music, books and press. This concept is defined in relation to cultural expressions in the context of the 2005 UNESCO Convention on the protection and promotion of the diversity of cultural expressions.”* (EC, 2010). Creative industries are *those industries which use culture as an input and have a cultural dimension, although their outputs are mainly functional. They include architecture and design, which integrate creative elements into wider processes, as well as subsectors such as graphic design, fashion design or advertising.* (EC, 2010).

Some authors believe that the term creative industry is only the new replacement for the term cultural industries (Fojtiková, 2011). However, today this approach was overcome. Cultural industry is nowadays the essential part of the creative industry; we can also talk about so called cultural sector or cultural core of the creative industries. (KEA, 2006).

Besides Green paper on CCI, in 2014, EU adopted the new program Creative Europe. The main aim of the program is to promote European cultural and linguistic diversity and cultural heritage and promoting the competitiveness of Europe's cultural and creative industries sectors, the audio-visual sector, with a view to promote intelligence inclusive and sustainable growth is therefore directly linked to the Europe 2020 objective. (EUR-LEX, 2013). Worse availability of cultural services can cause an outflow of population from rural areas across the EU. (Harakaľová, 2017). CCI also increase cultural capital, which compensates social inequalities (Galanská, Krkošková, 2015). Creative Europe linked two separately existing programs, namely Culture and MEDIA. Creating one program group should better reflect individual problems of supported industries that are largely the same.

However, there is no specific policy regarding CCI on the supranational EU level. The competences in supporting CCI are strictly in the hands of the member states. For this, structural funds can be used. Also, there is no single definition of CCI among EU member states. Of course, EU uses its definition in the documents, but there is nothing like single definition adopted by all member countries. Therefore, it is quite hard to create functioning supporting scheme, since CCI sector has many specifics.

The status of CCI among EU member states is also very different. The concept of creative industries was in Europe firstly defined by United Kingdom, a pioneer in the CCI politics in EU. UK, Germany and France also belong to the best countries regarding the cluster analysis done according to the Florida's 3T theory (Baculáková, Grešš, 2015). The countries with almost no support and favourable condition are Bulgaria, Czech Republic, Greece, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, Portugal, Romania and, sadly, Slovakia. (Baculáková, Grešš, 2015). However, even within the cluster, we see differences. Czech Republic is doing much better in creative clusters and centres than Slovakia (e.g. Brno has much more functioning concept than Bratislava has). Slovakia also belong to the moderate innovating countries (Lipková, 2012).

UK very often plays the role of know-how holder. Specialist often share their knowledge in the seminars across EU, but we believe, even the EU itself could create the platform of knowledge for the states, which are “new” in the adopting the concept of CCI.

## **2. CCI Status and Support in Slovakia and EU Countries**

We will demonstrate the status of CCI and its support on Slovakia, which belongs to the weakest cluster among EU. As mentioned in the beginning, there are some documents on CCI, which represent only theoretical basis about the concept. The documents are very general; we are missing qualitative and quantitative analysis (*Scope of the Creative Industry Development Strategy in the Slovak Republic, Report on the Status and Potential of the Creative Industry in Slovakia, Creative Industry Development Possibilities in Slovakia, Action plan, Innovative Slovakia – Scope and Challenges*). Without having a proper analysis on the status of CCI in the country, it is quite hard and risky to create conditions for support. There are also many other indicators on CCI – such a creative index. However, this indicator is based again on the data, which are not applicable in the all EU countries. For the initial analysis of the CCI status, the most important indicators are of course the share of CCI on country’s GDP, total employment and employment in each subsector as well as number of subject in the business. Only after analysing these basic macro indicators we can focus on the micro-level analysis.

On the national level, there is no statistic on the share of CCI on GDP or employment, which represents the most important indicator. The basic problem is that there is missing methodology on how to measure CCI. There are data on the number of specific subject in the CCI, such as museums, galleries, number of tickets sold, but no macro data. This problem is discussed in the creative community and even within academics for a long time.

We can get some overview on the employment in CCI and public expenditures on culture in the EU countries from the research of Stumpo and Manchin (2015):

**Table 1: Employment and Share of Public Expenditures in Culture in CCI**

<b>EU country</b>	<b>Employment in CCI</b>	<b>Public expenditures on culture</b>
<b>Austria</b>	1.57	3.1
<b>Belgium</b>	1.48	2.4
<b>Bulgaria</b>	1.30	3.9
<b>Croatia</b>	1.50	5.1
<b>Cyprus</b>	1.29	3.7
<b>Czech Republic</b>	1.70	7.8
<b>Denmark</b>	2.43	4.1
<b>Estonia</b>	2.77	7.8
<b>Finland</b>	2.36	3.2
<b>France</b>	1.73	4.1
<b>Germany</b>	2.01	2.8
<b>Greece</b>	1.19	1.9
<b>Hungary</b>	1.71	6.3
<b>Ireland</b>	1.54	3.4
<b>Italy</b>	1.20	2.2
<b>Latvia</b>	n/a	7.6
<b>Lithuania</b>	n/a	4.1
<b>Luxembourg</b>	1.21	6.8
<b>Malta</b>	1.20	3.8
<b>Netherlands</b>	1.80	5.5
<b>Poland</b>	1.30	4.3
<b>Portugal</b>	1.04	3.2
<b>Romania</b>	0.70	2.8
<b>Slovakia</b>	0.87	2.6
<b>Slovenia</b>	2.26	6.6
<b>Spain</b>	1.27	2.7
<b>Sweden</b>	2.30	3.2
<b>United Kingdom</b>	2.12	3.4

Source: Stumpo, G., Manchin, R. (2015), The resilience of employment in the Culture and Creative Sectors (CCSs) during the crisis

According to the research, the employment in CCI in Slovakia is on a very low level, compared to other countries. Even the public expenditures on culture are among the lowest. In 2016, Ministry of Culture allocated money from the IROP axis 3 (Integrated regional operational program) for the support of development of CCI. This year, new call will be announced – not only for decentralized support for entrepreneurs, but for the self-governing regions as well.

### 3. Centralized and Decentralized Support of CCI in Slovakia

Ministry of Culture prepared two supporting schemes – centralized for the self-governing regions, and decentralized for the entrepreneurs. The following table summarize the main aspects and differences of both schemes.

**Table 2: Centralized Support of CCI in Slovakia**

<b>Authorized applicant</b>	Self – governing regions (8)
<b>Targets</b>	To build one creative centre in each region
<b>KPI indicators</b>	Sustainability of creative centre +10 years after beginning of the activity  Sustainability of the working force

Source: author's own

The aim of the centralized support is to create one creative centre in each of the self-governing region in Slovakia. Region can cooperate with the city, which usually provides a suitable building for the project. Creative centre is therefore physical location, but by the nature of its activities it is also the virtual providers of services for the distant subjects. Creative centre involves spaces for rents, co – working spaces, ateliers, presentation spaces. Besides infrastructure for creative workers, the valued added of the centre is the consulting service (legal, economic, experience sharing etc.) (British Council, 2016). Creative centre is not the employer; it is just a platform or a space that should attract creative workers and entrepreneurs. Creative activities itself are provided by the creative workers – therefore, centralized and decentralized support should be connected together. Creative centre should be commercial, meaning that it should make profit.

**Table 3: Decentralized Support of CCI in Slovakia**

<b>Authorized applicant</b>	Natural person, legal entity, non-profit organisation, free occupation
<b>Targets</b>	Support of S&M enterprises  Support of employment in CCI
<b>KPI indicators</b>	Sustainability of the FTE created +3 years after the end of the project

Source: author's own

Decentralized support is aimed to support individual project of creative workers. Allocation for the support represents 31 mil. euro. The use of money is conditional for these activities:

- procurement of tangible and intangible assets;
- renovation works in connection with the acquisition of new technology (interior);
- support of marketing activities;
- space and technology rent;
- support of creative production. (Ministry of Culture, 2016).

The activities are restricted with percentage of the money – only 20 % of the money can be allocated in the reconstruction of infrastructure (since the aim of the projects is not the reconstruction itself, but the creative activity). Ministry also earmarks authorized sectors by NACE codes according to the methodology ESS-net culture. The CCI sectors include performing arts, music, audio-visual media, advertising, art crafts, cultural heritage, archives, libraries, literature and printed media. There are several criteria for the assessment of the project – formal, criteria of number of FTE created, the location of the project as well as the size of the enterprise.

Besides the good idea behind the supporting schemes, we can we can highlight several potential threats.

- decentralized support is very byrocratic. Formal criterion is one of the exclusion criterions, meaning that if project is not formally prepared, it will be excluded. It is aimed to help people working in the CCI, who are mostly free occupations, for them, to prepare such a project means to hire a company and pay a lot of money;
- the assessment of these projects is often dubious and non-transparent;
- centralized support should be more flexible at adjusting to the needs of each self-governing regions;
- there are some irrelevant criteria (such as minimum floor area of the building for reconstruction etc.);
- the evaluation criteria does not fit the nature of functioning of CII (FTE is not relevant in this case);
- the new call was postponed;
- too little time for preparation of the project;
- there is also strong link between Ministry and private agency that is providing training and preparing of the projects.

#### **4. Conclusion**

The support of CCI is now part of the EU programs. However, each member country has its own competence to support CCI. Some of them do not have enough experience. Therefore, we believe EU could be the source of knowledge. The biggest challenge is the access to relevant statistical data. There are some data available in the EUROSTAT database. But there is no consolidated account on creative industries. Therefore, each country is doing its own statistic. In the case of Slovakia, statistics is only in the process of preparation. This causes lot of problems, since the policy making is already several years in process, but we still do not have relevant statistical data on national level. It is therefore very hard to create proper measures because they do not come from the economic analysis, just the mapping of single creative sectors. Action plan is mentioning the method of ESS-net Culture, which is based on the single NACE codes of relevant industries. We believe this is the best way how to coordinate also the statistics on the supranational level. If there is one account on CCI in EU consisting of the



same NACE codes, the comparison between EU countries would be not only easier, but transparent and most important statistically correct.

We believe this could help to improve the process of policy making in the countries, which are new in the CCI phenomenon. Adoption of Creative Europe program helped to stimulate the discussion about CCI in Slovakia. Now, it is clear the CCI is not a short-term trend and if the country wants to adopt in the fast-changing global environment, creative industries are the sources of innovation potential.

However, until now, the goals haven't been reached. It took almost 10 years to create action plan for the development of CCI, however, this action plan haven't resulted in the policy adoption. Without any serious policy framework, Slovakia started the direct project support via IROP. It is clear now, that this support fails. Delayed is not just the evaluation of last year's projects, but the new call as well (initially planned in January, but not active until now). The centralized regional support is currently in the same state.

Regarding the competences in the policy making, we see two possible scenarios – first one is that EU will adopt framework on consolidated CCI account. Due to exclusive competencies it is highly unlikely that EU will adopt more specific supportive program than Creative Europe. However, common statistical methodology would be desired. This scenario is conditional to the perception of importance of CCI for the EU economy. (last mapping done in 2015 by EY). Second one is the status quo – each country adopting own policy and methodology. In this case, the differences in the CCI sector in the EU members states will continue to grow. Due to the different methodology, the comparison of data will be very difficult

## References

- [1] Baculáková, K. and Grešš, M. (2015). Cluster analysis of creative industries in the EU. In *Economic Annals-XXI*, 9-10, 15-18.
- [2] British council (2016). *Creative Hubs: Understanding the New Economy*. [online]. [cit. 10.11.2017] <https://creativeeconomy.britishcouncil.org/media/uploads/files/HubsReport.pdf>
- [3] European Commission (2010). *Green Paper - Unlocking the potential of cultural and creative industries COM/2010/0183 final* [online]. [cit. 04.03.2018]. <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A52010DC0183>
- [4] European Commission (2013). *Regulation (EU) No 1295/2013 of the European Parliament and of the Council*. [online]. [cit. 25.01.2018]. <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32013R1295>
- [5] Fojtíková, L. (2011). Business strategy of the European union on the way out of the crisis. In *Proceedings from the 9th International conference Economic policy in the European union member countries* (pp. 92-104). Czech Republic.
- [6] Galanská, N. and Krkošková, Z. (2015). K vymedzeniu sociálneho a kultúrneho kapitálu v kontexte migrácie. In *Economic, political and legal issues of international relations 2015* pp. 119-128.
- [7] Harakaľová, E. (2017). Podpora rozvoja vidieka v Slovenskej republike z prostriedkov EAFRD v programovacom období 2007 – 2013 In *Economic, political and legal issues of international relations 2017* pp. 155-160.

- [8] KEA (2006). *The Economy of Culture in Europe*. [online]. [cit. 01.03.2018]. <http://www.keanet.eu/ecoculture/studynew.pdf>
- [9] Lipková, Ľ. (2012). Innovation Policy of the European Union. In *Proceedings of the 1st International Conference on European Integration 2012* pp 171-178.
- [10] Ministry of Culture (2016). *IROP PO3 Mobilizácia kreatívneho potenciálu v regiónoch*. [online]. [cit. 01.03.2018]. <http://www.culture.gov.sk/podpora-projektov-dotacie/irop-po3-mobilizacia-kreativneho-potencialu-v-regionoch-/vyzva-decentralizovana-podpora-2fc.html>
- [11] Stumpo, G. and Manchin, R. (2015). *The resilience of employment in the Culture and Creative Sectors (CCSs) during the crisis*.

## Students' Entrepreneurial Skills and European HEI's Performance in Entrepreneurship and Innovation: A Case Study

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### Abstract

*In the context of the European Union's interest in promoting entrepreneurial education and learning, entrepreneurial universities aim to be strong and innovative organizations able to provide effective and sustainable solutions for social and economic development, but without giving up on their traditional task of ensuring a high scientific education for young people. Our paper uses survey data gathered from 194 students at a Romanian university included in the framework of the Entrepreneurship University program and the strategic instrument HEInnovate, on 7 pillars. The analysis reveals a very strong correlation between the pillars "Leadership and Governance" and "Organisational Capacity: Funding, People and Incentives", and between "Knowledge Exchange and Collaboration" and "The Internationalised Institution", respectively. However, data indicates a "below average" performance in terms of innovation in this university from a country which itself is considered a modest innovator by EU reports on entrepreneurship and innovation.*

**Keywords:** EU entrepreneurial education, HEInnovate survey, University of Oradea, Romania

**JEL Classification:** A23, I23, I25, L26, O32

## 1. Introduction

EU objectives in the timeframe of 2020 and beyond highlight that building a dynamic, innovative enterprise sector focused on sustainable development, which would provide more and better jobs, can only be achieved by incorporating creativity, innovation and entrepreneurship into education, and especially among the younger generations (European Commission, 2012, p. 21). Entrepreneurial education enhances individual capacities to turn ideas into actions, stimulates creativity and risk-taking, and the ability to plan and manage projects. Through adequate entrepreneurial education, EU member states aim to improve young people's entrepreneurial attitudes, increase employers' skills, encourage the creation of innovative businesses, and increase the role of young generations and entrepreneurs in society and economy. A way by which universities can combine traditional teaching and research objectives with those of stimulating entrepreneurship among younger generations remains a considerable challenge. The objective of our paper is to highlight how options, positive attitudes, and the openness of students to a potential entrepreneurial career can generate an optimistic rhetoric that overshadows the modest achievements and cumbersome accommodation of (some) higher education institutions (HEIs) to the realities of a changing economy and society.

## 2. Literature Review

The social importance of HEIs as generators of knowledge and education is unanimously recognized, as one of the major roles of higher education being clearly meeting the socio-economic needs of the state and of the economic environment. For Central and Eastern Europe (CEE) countries education is a way of recovering the differences in competitiveness which separate them from the developed EU countries and even to reduce regional disparities within their own countries (Staničková, 2014). HEIs are thus linked to organizational entrepreneurship as an outlook applicable to all conditions and aspects of life that create and implement new ideas and ways to do things, pro-active regarding the uncertainty and complexity of the environment, and consequently, promoting change and development through enhancing the capacity to recognize and act upon new opportunities (Jameson and O'Donnell, 2015, p. 73) and (OECD and European Commission, 2012). As a result, HEIs are also involved in the development of entrepreneurial intentions and behaviour (Hannon, et al., 2005; Lüthje and Franke, 2003), “since the education offered by a university mostly influences the career selection of students, universities can be seen as potential sources of future entrepreneurs” (Turker and Selcuk, 2009, p. 144).

There is considerable literature on the positive relationship between entrepreneurial education, entrepreneurial intentions and the stimulation of business initiatives (Kolvereid, 1996; Wiklund, 1999; Lüthje and Franke, 2003). HEIs become true academic, competitive and adaptable enterprises, responsive to the changing needs of economic actors and society, supporting and improving partnerships with other stakeholders in society (Gibb and Hannon, 2006). If the entrepreneurial university dealt at first with the spread of knowledge regarding entrepreneurship, it has gradually expanded to the adoption of entrepreneurial spirit among university graduates and culminates in the inclusion of entrepreneurship at organizational and conceptual level, useful to all participating parties – including academic management.

There are also reserved opinions that support an unconvincing or even negative impact of entrepreneurial education on young generations (Oosterbeek, et al., 2010; Graevenitz, et al., 2010) a mismatch or even waste of educational investment which would severely affect the core functions and the efficiency of HEIs. These errors are likely to generate “university risks and a schizophrenic entrepreneurial divide within their institution” (Philpott, et al., 2011, p. 169), and judging HEIs on the basis of externally imposed indicators “without taking into an account the mission of HEIs makes an appropriate oversimplification” (Sedláček, 2014, p. 608). EU studies regarding the effects and impact of entrepreneurship programs in higher education mention that some academics consider entrepreneurship (understood as learning how to start and lead a business) an “endeavour [which would] be at odds with the general objectives of higher education institutions and, therefore, they are reluctant to engage in entrepreneurship education” (European Commission, 2012, p. 23).

There are numerous initiatives attempting to unify national strategies regarding entrepreneurial education within a European platform, through which the impact of this education may be measured in a European context and in terms of policies, not only to the level of disparate projects (European Commission, 2012). A number of studies and programmes evaluates, through different instruments and techniques, the short-term impact of entrepreneurial education on student, estimating both entrepreneurial cognitive competences (financial and strategic aptitudes manifested in role-plays, or designing business plans), as well as non-cognitive (Danish Foundation for Entrepreneurship, 2017), entrepreneurial skills, abilities and perception about a future entrepreneurial career (Badulescu and Dodescu, 2010). Among these instruments, used both on a European and an international level, we can mention: OctoSkills, Global Entrepreneurship Monitor, Entrepreneurial Skills Pass (ESP), Entre Intention,

LoopMe, Measurement Tool for Enterprise Education (MTEE) (Danish Foundation for Entrepreneurship, 2017), GUESS (Bartha and Gubik, 2017), and, finally, the one on which we will rely in our research, HEInnovate, developed by the EU and OECD (Ruskovaara and Pihkala, 2016; HEInnovate, 2014).

### 3. Problem Formulation and Methodology

The information presented in this paper was obtained analysing the "Entrepreneurship University" project organized by Junior Achievement Romania (hereinafter JA Romania). Thus, in October 2016, JA Romania launched a project dedicated to higher education institutions in Romania, HEInnovate, as a self-assessment tool for Romanian universities that wish to explore their entrepreneurial and innovation potential, allowing each university to assess its current situation, but especially to identify the main areas with potential for development based on seven dimension (pillars), included in the self-evaluation process, namely: 1) Leadership and Governance, 2) Organizational capacity, people and incentives, 3) Entrepreneurship development through teaching and learning, 4) Pathways for Entrepreneurs, 5) External relations for exchange of expertise, 6) Entrepreneurial HEI as an international institution, 7) Impact assessment. Each self-assessment area comprises roughly five or six statements in total (see Annexe: HEI self-assessment: The seven dimensions (pillars) and detailed statements). All pillars refer to entrepreneurship (either as groundwork for students' future career or as an objective of an entrepreneurial university), especially the pillars *II Organizational Capacity* or *III Teaching and Learning*. The self-assessment of the Faculty of Economics of the University of Oradea, Romania was carried out using an online questionnaire filled in by 195 persons, out of which: nine professors, two researchers, one administrative leader, and four external stakeholders, while the remaining 179 are students enrolled in the Faculty of Economics of the University of Oradea. Each person has to evaluate on a scale ranging from 1 to the maximum of 5 to what extent certain objectives followed by HEInnovate are achieved by this university. The methodology followed the HEInnovate requirements, including on-line data collection. In this respect, our sample of respondents is self-selected.

In the first part of our analyses we present the distribution of our subjects' responses regarding the 7 pillars of the model.

**Table 1: Description of Variables**

Scale	Alpha Cronbach	Missing cases	Items	Mean	Mean/item	Median	Standard Deviation
<b>I</b>	0.818	2	5	17.35	3.47	17	3.93
<b>II</b>	0.826	5	5	16.74	3.35	17	4.13
<b>III</b>	0.834	11	5	17.2	3.44	17	3.94
<b>IV</b>	0.888	21	6	20.23	3.37	20	5.32
<b>V</b>	0.853	5	5	16.98	3.40	17	4.1
<b>VI</b>	0.863	17	5	17.46	3.49	18	4.09
<b>VII</b>	0.893	16	6	20.65	3.44	21	5.07

Source: authors' calculation based on data-set

In Table 1 the Alpha Cronbach indicator shows a good consistency, with a value of over 0.8, giving us the guarantee that the items of our instrument measure the same construct. The similar results of averages made on the 7 pillars of the analysis tool indicate that the subjects rated the described characteristics (mostly) equally. Both average and median on the 7 pillars

analysed indicate a high degree of similarity of responses. However, for a more in-depth analysis of the responses to this questionnaire, we have proposed an analysis of the correlations that are established between the 7 pillars of our model, which can provide us with a more detailed description of how the respondents appreciate entrepreneurship and innovation in their higher education institution.

**Table 2: Correlations Between the Pillars**

		Correlations						
		I	II	III	IV	V	VI	VII
<b>I Leadership and Governance</b>	Pearson Correlation	1	.849**	.712**	.757**	.807**	.748**	.799**
	Sig. (2-tailed)		0	0	0	0	0	0
	N	192	184	182	172	179	176	177
<b>II Organizational Capacity: Funding, People and Incentives</b>	Pearson Correlation	.849**	1	.804**	.814**	.785**	.716**	.796**
	Sig. (2-tailed)	0		0	0	0	0	0
	N	184	185	180	170	177	174	174
<b>III Entrepreneurial Teaching and Learning</b>	Pearson Correlation	.712**	.804**	1	.786**	.746**	.655**	.755**
	Sig. (2-tailed)	0	0		0	0	0	0
	N	182	180	183	171	179	175	176
<b>IV Preparing and Supporting Entrepreneurs</b>	Pearson Correlation	.757**	.814**	.786**	1	.828**	.692**	.815**
	Sig. (2-tailed)	0	0	0		0	0	0
	N	172	170	171	173	170	166	166
<b>V Knowledge Exchange and Collaboration</b>	Pearson Correlation	.807**	.785**	.746**	.828**	1	.787**	.847**
	Sig. (2-tailed)	0	0	0	0		0	0
	N	179	177	179	170	180	174	175
<b>VI The Internationalized Institution</b>	Pearson Correlation	.748**	.716**	.655**	.692**	.787**	1	.773**
	Sig. (2-tailed)	0	0	0	0	0		0
	N	176	174	175	166	174	177	172
<b>VII Measuring Impact</b>	Pearson Correlation	.799**	.796**	.755**	.815**	.847**	.773**	1
	Sig. (2-tailed)	0	0	0	0	0	0	
	N	177	174	176	166	175	172	178
**. Correlation is significant at the 0.01 level (2-tailed).								

Source: authors' calculation based on data-set

The analysis shows a very strong correlation between items that represent the linear relationship between two variables (Table 2). Although we have several correlations with values above 0.8, the highest correlation values occur in two cases in this analysis model. There

is a strong correlation between *Leadership and Governance* and *Organizational Capacity: Funding, people and incentives*, where the Pearson coefficient is 0.849. The second strongest correlation is between *Exchange of Experience* and *Collaboration and the Internationalized Institution*, with a Pearson coefficient of 0.847. A reasonable correlation, but minor in comparison to those mentioned above, of 0.655 is between the pillar *Teaching and Learning of Entrepreneurship notions* and *Internationalized Institution*. Of course, this minor difference between correlations does not allow us to assert that there are significant links between some of the pillars of our model. This model of correlations suggests that our participants appreciate as equally important all the components described by pillars.

### 3. Discussion

Although the results of the analysis, based on the HEInnovate study, seem encouraging at a glance, we are asking ourselves to what extent do they correspond to reports and studies of European and international institutions regarding performance in entrepreneurship and innovation. In a national context, Romania's profile in the entrepreneurship - innovation – competitiveness relation, there are obvious disparities. Compared to the EU average or ECE countries, the rates of *entrepreneurial efficiency*, *entrepreneurial employees* and *young business entrepreneurs* (based on Global Entrepreneurship Monitor's methodologies) are encouraging (Dézsi-Benyovszki, et al., 2014; Badulescu and Cadar, 2016). However, Romania is a modest innovator, probably the weakest in the EU, according to most indicators used by official reports as *Innovation Union Scoreboard 2017* (European Commission, 2017).

In the particular context of the studied university (the University of Oradea, henceforth UO) as a promoter of entrepreneurship and innovation, we notice obvious mismatches between the results of the HEInnovate study and official data. On one hand, the HEInnovate research highlights an agreement of over 66% with statements like “*HEI demonstrate active involvement in partnerships and relationships with a wide range of stakeholders*”, or “*HEI has strong links with business incubators, technology parks and other external initiative*”. On the other hand, according to the Romanian State Office for Inventions and Trademarks (OSIM) during 2007-2016 a number of 37 HEIs in Romania filed 1837 patent applications (OSIM, 2017), with an average of approximately 50 applications per HEI during this timeframe, but the share of UO (only 15 patents filed) is below 1% of the total. Moreover, UO is not one of the 15 HEIs which have signed partnerships with the State Office for Inventions and Trademarks in the field of Intellectual Property (OSIM, 2017). To sum up, UO is not actively taking part in any business incubators opened in the last 5 years and is a part of only 2 research and learning HUBs (JA Romania, 2017). In other words, although the perceptions and receptiveness of HEI staff and students for entrepreneurship achieve high scores and obvious correlations between specific indicators, the actual extent of the involvement of HEIs in competitive and innovative entrepreneurship is rather modest.

### 4. Conclusion

Perseverance in developing a system of high-quality entrepreneurial education involves an even better insight in the impact of entrepreneurial education on the younger generations. Somewhat surprisingly, until now there has been an insufficient amount of studies on the effects of entrepreneurial education, and these few were often modest in their objectives. In other cases, the optimistic results of these studies regarding the eagerness and positive outlook of students and university staff on the involvement of HEI in stimulating innovation and collaboration paint a distorted picture on the actual role of these institutions in the fields of

entrepreneurship and innovation. Our research of one Romanian university involved in the HEInnovate study developed by the EU and OECD highlights the positive attitudes and perceptions of entrepreneurship, and a strong correlation between pillars such as *Leadership and Governance* and *Organisational Capacity: Funding, People and Incentives*, and between *Knowledge Exchange and Collaboration* and *The Internationalised Institution*, respectively, as well as an active involvement of this HEI in partnerships and relationships with a wide range of stakeholders, strong links with business incubators, technology parks and other external initiative. Nevertheless, it is our intention to continue our analysis through other statistical methods in order to determine the particularities of the assessments done by the participants in our study. The analysis of official data shows a significantly more limited performance of the institution, in a national framework which it is itself considered 'modest' in EU reports on innovation and entrepreneurial competitiveness. The lack, at the level of the investigated university, of relevant data series regarding the number and share of graduates who have succeeded in entrepreneurial careers, the relatively small scale of this research, and caution in extending the results to a significant number of Romanian or EU universities can be considerable limitations to the generalisation of the deductions of our research. Probably, the sample composition (i.e. primarily students, according to HEInnovate guidelines, who are unfamiliar with organizational, strategic and cooperation issues) contributes to this "too" optimistic vision. Additionally, we consider that the reduction of the discrepancies between factual realities, on one hand, and attitudes and perceptions of the performance of HEIs presented in these studies, on the other hand, are a major challenge in understanding the role of HEIs in entrepreneurial education. Only in this way these institutions can achieve these aims - relevant knowledge and abilities, and an increase in the number of innovative and dynamic firms, prepared for the challenges of the contemporary economy.

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### **References**

- [1] Badulescu, D. and Cadar, O. (2016). Romania: Many Entrepreneurs but Few Innovators. *The Annals of the University of Oradea. Economic Sciences*, vol. XXV, iss. 1, pp. 465-475.
- [2] Badulescu, A. and Dodescu, A. (2010). Entrepreneurial Training and the Attitude toward Entrepreneurship. Assessing the Impact of AntrES programme. In *Proceedings of the 5th WSEAS International Conference on Economy and Management Transformation*, vol. 2, pp. 21-30.
- [3] Bartha, Z. and Gubik, A.S. (2107). Cultural Characteristics and the Entrepreneurial Intentions of University Students. '*Club of Economics in Miskolc*'. *Theory, Methodology, Practice*, vol. 13, iss. 2, pp. 3-12.
- [4] Danish Foundation for Entrepreneurship (2017). *Can you measure the development of students' entrepreneurial skills?* [online]. [cit.2017-12-22] Available at: <http://eng.ffe-ye.dk/media/785695/can-you-measure-the-development-of-students-entrepreneurial-skills.pdf>.
- [5] Dézsi-Benyovszki, A., Nagy, A. and Szabo, T.-P. (2014). *Entrepreneurship in Romania. Country Report 2014*, Global Entrepreneurship Monitor.



- [6] European Commission (2012). *Effects and impact of entrepreneurship programmes in higher education*, Brussels: European Commission. Entrepreneurship Unit, Directorate-General for Enterprise and Industry.
- [7] European Commission (2017). *Innovation Union Scoreboard 2017*, Brussels: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs.
- [8] Gibb, A. and Hannon, P. (2006). Towards the entrepreneurial university. *International Journal of Entrepreneurship Education*, vol. 4, pp. 73–110.
- [9] Graevenitz, G. V., Harhoff, D. and Weber, R. (2010). The Effects of Entrepreneurship Education. *Journal of Economic Behavior and Organization*, vol. 76, iss. 1, pp. 90–112.
- [10] Hannon, P., Collins, L. and Smith, A. (2005). Exploring Graduate Entrepreneurship: A Collaborative, Co-Learning Based Approach for Students, Entrepreneurs and Educators. *Industry and Higher Education*, vol. 19, iss. 1, pp. 11–23.
- [11] HEInnovate (2014). *The Entrepreneurial Higher Education Institution: A Review of the Concept and its Relevance Today* [online]. [cit.2017-12-12] Available at: [https://heinnovate.eu/sites/default/files/heinnovate\\_concept\\_note\\_june\\_2014.pdf](https://heinnovate.eu/sites/default/files/heinnovate_concept_note_june_2014.pdf).
- [12] HEInnovate (2017). *Training Package* [online]. [cit.2018-02-12] Available at: <https://heinnovate.eu/en/training-material/nojs/104/download>.
- [13] Jameson, J. and O'Donnell, P. (2015). *The Entrepreneurial University: a Unifying Theme for TU4Dublin. Stream 1: Enterprise and Engagement* [online]. [cit.2018-02-02] Available at: <http://arrow.dit.ie/st1>.
- [14] Junior Achievement (JA) Romania (2017), *Atelierul digital* [online]. [cit.2017-12-20] Available at: <http://atelieruldigital.jaromania.org/>
- [15] Kolvereid, L. (1996). Organisational employment versus self employment: reasons for career choice intentions. *Entrepreneurship Theory and Practice*, vol. 20, iss. 3, pp. 23–31.
- [16] Lüthje, C. and Franke, N. (2003). The ‘making’ of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT. *R&D Management*, vol. 33, iss. 2, pp. 135–147.
- [17] OECD and European Commission (2012). *A Guiding Framework for Entrepreneurial Universities*. [online]. [cit.2017-12-20] Available at: <https://www.oecd.org/site/cfecpr/EC-OECD%20Entrepreneurial%20Universities%20Framework.pdf>.
- [18] Oosterbeek, H., van Praag, M. and Ijsselstein, A. (2010). The impact of entrepreneurship education on entrepreneurship skills and motivation. *European Economic Review*, vol. 54, pp. 442–454.
- [19] Philpott, K., Dooley, L., O'Reilly, C. and Lupton, G. (2011). The entrepreneurial university: Examining the underlying academic tensions. *Technovation*, vol. 31, pp. 161–170.
- [20] Ruskovaara, E. and Pihkala, T. (2016). *Review, Comparison and Evaluation of Seven Assessment Tools – Research Project*, European Entrepreneurship Education Network.

- [21] Sedláček, J. (2014). Higher Education Governance in the EU - Side Effects of Using Measurable Performance Indicators. In *Proceedings of the 2nd International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, pp. 603-609.
- [22] Staničková, M. (2014). Competitiveness Factors in Regional Growth: the Case of Central and Eastern European Countries. In *Proceedings of the 2nd International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, pp. 634-643.
- [23] State Office for Inventions and Trademarks (OSIM) (2017). *Patent of invention applications registered by universities at OSIM during 2007 - 2016*. [online]. [cit.2018-01-12] Available at: [http://www.osim.ro/despre\\_noi/statistici/Statistica\\_Cereri\\_de\\_brevet\\_de\\_inventie\\_inregistrate\\_de\\_universitati\\_la\\_OSIM\\_2007-2016.xls](http://www.osim.ro/despre_noi/statistici/Statistica_Cereri_de_brevet_de_inventie_inregistrate_de_universitati_la_OSIM_2007-2016.xls).
- [24] Turker, D. and Selcuk, S. S. (2009). Which Factors Affect Entrepreneurial Intention of University Students? *Journal of European Industrial Training*, vol. 33, iss. 2, pp. 142-159.
- [25] Wiklund, J. (1999). The Sustainability of the Entrepreneurial Orientation-Performance Relationship. *Entrepreneurship Theory and Practice*, vol. 24, iss. 1, pp. 37-48.

## **Appendix: HEI self-assessment: The seven dimensions (pillars) and detailed statements**

### **I Leadership and Governance**

*IQ1 Entrepreneurship is a major part of the HEI's strategy.*

*IQ2 There is commitment at a high level to implementing the entrepreneurial agenda.*

*IQ3 There is a model in place for coordinating and integrating entrepreneurial activities across the HEI.*

*IQ4 The HEI encourages and supports faculties and units to act entrepreneurially.*

*IQ5 The HEI is a driving force for entrepreneurship and innovation in regional, social and community development.*

### **II Organisational Capacity: Funding, People and Incentives**

*IIQ1 Entrepreneurial objectives are supported by a wide range of sustainable funding and investment*

*IIQ2 The HEI has the capacity and culture to build new relationships and synergies across the institution.*

*IIQ3 The HEI is open to engaging and recruiting individuals with entrepreneurial attitudes, behaviour and experience.*

*IIQ4 The HEI invests in staff development to support its entrepreneurial agenda.*

*IIQ5 Incentives and rewards are given to staff who actively support the entrepreneurial agenda.*

### **III Entrepreneurial Teaching and Learning**

*IIIQ1 The HEI provides diverse formal learning opportunities to develop entrepreneurial mind-sets and skills.*

*IIIQ2 The HEI provides diverse informal learning opportunities and experiences to stimulate the development of entrepreneurial mind-sets and skills.*

*IIIQ3 The HEI validates entrepreneurial learning outcomes which drives the design and execution of the entrepreneurial*

*IIIQ4 The HEI co-designs and delivers the curriculum with external stakeholders.*

*IIIQ5 Results of entrepreneurship research are integrated into the entrepreneurial education offer.*

#### **IV Preparing and Supporting Entrepreneurs**

*IVQ1 The HEI increases awareness of the value of entrepreneurship and stimulates the entrepreneurial intentions of students, graduates and staff to start-up a business or venture.*

*IVQ2 The HEI supports its students, graduates and staff to move from idea generation to business creation.*

*IVQ3 Training is offered to assist students, graduates and staff in starting, running and growing a business.*

*IVQ4 Mentoring and other forms of personal development are offered by experienced individuals from academia or industry.*

*IVQ5 The HEI facilitates access to financing for its entrepreneurs.*

*IVQ6 The HEI offers or facilitates access to business incubation.*

#### **V Knowledge Exchange and Collaboration**

*VQ1 The HEI is committed to collaboration and knowledge exchange with industry, the public sector and society.*

*VQ2 The HEI demonstrates active involvement in partnerships and relationships with a wide range of stakeholders.*

*VQ3 The HEI has strong links with incubators, science parks and other external initiatives.*

*VQ4 The HEI provides opportunities for staff and students to take part in innovative activities with business / the external environment.*

*VQ5 The HEI integrates research, education and industry (wider community) activities to exploit new knowledge.*

#### **VI The Internationalised Institution**

*VIQ1 Internationalisation is an integral part of the HEI's entrepreneurial agenda.*

*VIQ2 The HEI explicitly supports the international mobility of its staff and students.*

*VIQ3 The HEI seeks and attracts international and entrepreneurial staff.*

*VIQ4 International perspectives are reflected in the HEI's approach to teaching.*

*VIQ5 The international dimension is reflected in the HEI's approach to research.*

#### **VII Measuring Impact**

*VIIQ1 The HEI regularly assesses the impact of its entrepreneurial agenda.*

*VIIQ2 The HEI regularly assesses how its personnel and resources support its entrepreneurial agenda.*

*VIIQ3 The HEI regularly assesses entrepreneurial teaching and learning across the institution.*

*VIIQ4 The HEI regularly assesses the impact of start-up support.*

*VIIQ5 The HEI regularly assesses knowledge exchange and collaboration.*

*VIIQ6 The HEI regularly assesses the institution's international activities in relation to its entrepreneurial agenda.*

Source: HEInnovate Training Package, <https://heinnovate.eu/en/training-material/nojs/104/download>

## **Future Europe: The Bulgarian Model of Integration – Minorities, National Psychology and Migration**

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### **Abstract**

*The Eastern Expansion of the EU was linked with institutional problems, but among other benefits, it has also enriched the Union with the historical integration lessons of the new Member States, since their expertise is not less valuable than the old ones. Bulgaria is among the newest members of the EU, and is not large in terms of territory or population. Nevertheless, due to its geographical location, the country's historic fate is to be an external border of Europe, a country located at the crossroad between The East and the West. That's why it's no surprise that Bulgaria has centuries-old experience of coexistence of ethnic groups with different culture and religion. Based on these preconditions, this report aims to examine the successful and unsuccessful models of integration in the newest history of the Bulgarian state. The analysis focuses on Bulgarian state policies towards minorities and in times of refugee waves, and on the reactions and changes in attitude of ordinary people. The intention of the authors is to offer this paper as publicly available knowledge that together with similar analyses of other member states could be beneficial for the development of a common model, which could face the problems of future European integration.*

**Keywords:** European crisis, integration model, migration, minorities, social inequality

**JEL Classification:** F15, F22, O15, O21, H12

### **1. Introduction**

Europe is in crisis. Whether we call it a crisis of identity, of values or institutions, the perception of a critical moment in the development of European integration is a growing groundswell among public discussions in all EU Member States. Regardless of the different national peculiarities and interests, the common goal of a united and stable European future suggests that no single member of the EU could separately solve the problems that are disrupting the foundations of the Union. Growing social inequalities, demographic stagnation and minority integration, are all issues requiring efforts of the whole European Union. While some authors argue that the European Community has successfully overcome many critical moments in its history (Tendera-Wlaszczuk, 2016), others emphasize that even if crises are not something new to the EU, they still have begun to come very quickly one after another, with some of them affecting the heart of the European integration process. (Koprinarov, 2016). Indeed, while the continent was still recovering from the financial crisis and the following recession, it was hit by one of the largest refugee waves since the end of the Second World War. Both the financial and refugee crises have exposed the institutional inability of the European Union and have questioned the basic principle of solidarity between member states. The deepening of regional disparities since 2008 has led Europeans to doubt the success of the

cohesion policy and the potential of the European project to provide welfare to all its ends. Regardless of the adoption of the so called European Agenda on Migration by the European Commission, up till now the European leadership has failed to come up with a comprehensive approach to deal with the refugee crisis, which is supported by the national authorities of all member states. On the contrary, we have witnessed uncoordinated solitary actions such as Germany's "Refugees welcome" in 2015 on one hand, and the open disagreement on refugee relocation schemes from individual Member States on the other. We can judge on the importance of the migration problem by seeing it eventually turn into one of the major topics of the British referendum on leaving the EU- the so called Brexit. And so, in spite of the optimism of the European elite, in 2016 European integration was reversed for the first time in history. And here comes the legitimate question: are we able to stop turning disintegration into a permanent process?

## 1.1 Origins of the Crisis

The current European crisis has two main dimensions.

The first dimension is political and concerns the growing absence of democracy in the European political system. European institutions are increasingly moving away from their citizens, who are in their turn losing interest in participating in the political processes. An obvious manifestation of this apathy is the ever lower activity in European parliamentary elections and the rise of Euroscepticism throughout the continent. In 1979, the turnout in the European elections was 62% and in all subsequent elections the activity was reduced by 2 to 5% (Koprinarov, 2016). European citizens have an increased sense that their voice is not heard in Brussels. That instead of looking after the interests of taxpayers and voters, their representatives in the European Parliament serve lobbyists and large corporations.

The second dimension is economic and is rooted in the deepening social inequality in Europe. With the exception of the wars for the Yugoslavian heritage, the European Union has so far achieved its goal of preventing large-scale military conflicts on the European continent. It didn't do so well with another main goal, that of achieving prosperity for its citizens. There are large social disproportions even in the regions of individual countries, major differences between member states, but the real imbalances are between centre and periphery. For example, according to Eurostat figures of 2018, the difference between the lowest and the highest minimum wage in the EU is almost 8 times (Eurostat, 2018). Such differences cannot be ignored because they affect the overall competitiveness of the European economy (Kyjonková, 2014). In 2017 there was a widespread public debate in several European countries about the lower quality of a number of consumer products in the new Member States, compared to same products in their richer neighbour countries. These are just some of the reasons why some researchers claim that Multi-speed Europe is now a fact and the segmentation of the European Union is not temporary but a permanent state (Tendera-Wlaszczuk, 2016).

### 1.1.1 Main Challenges- Climate Change, Demographic Issues and Migration

Why is cohesion so important to the future of European integration? Well, on one hand cohesion is often related to the existence of harmonious relations between social groups. (Kyjonková, 2014). On the other, larger income gaps lead to deteriorations in social relations, human capital and health (Wilkinson, Pickett, 2009). In other words, in unequal societies we are lot less likely to help each other and trust those we consider alien. And as mentioned before, the challenges, that we Europeans are now facing, require the effort of all.

Despite living in Europe without major conflicts and in relative prosperity for more than half a century, we are not witnessing a golden age of ascent of the European civilization, but on the contrary we are observing times of unprecedented demographic decline, especially for the countries in Eastern Europe. Projections for the future are even more pessimistic, with the EU population expected to decline by more than 30 million by 2050, with an expected migration from the outside of almost the same figures (Manov, 2015). This means that according to estimates even the upcoming migratory pressure is not able to offset the demographic stagnation in the union. Demographic projections for the same period are showing that the African continent is expected to double its population, from 1186 million to 2 467 million. (Manov, 2015).

Climate change impact projections are even less reassuring. In Africa, there is already a serious shortage of resources for the growing population of the continent, especially for drinking water and irrigation. In fact, the civil war in Syria was preceded by a severe 5-year drought that led to serious problems with feeding the rural population and served as a catalyser for dissatisfaction with the Bashar Assad regime (Balabanov, 2017). The expected increase in the average annual temperatures in West Africa, as a result of climate change, accompanied by decrease of rainfall, will undoubtedly lead to even greater water shortages for its rapidly growing population, and also to more soil erosion and less arable land. As a result we will have a very strong pushing factor for new waves of migration from Africa and the Middle East to Europe (Koprinarov, 2016).

## **2. Problem Formulation and Methodology**

From our analysis until now, it is clear that in the near or far European future we are going to face more and more refugee waves. And the clear distinction between refugees, economic or climate migrants will become more and more difficult. How do we deal with the problems of current and forthcoming migration waves so that the pillars of EU- integration are not shaken and social peace on the continent is not threatened? In order to answer that question, we need to analyse the historical integration expertise of people with different culture and religion within individual member states, the fears and positive emotions that the European refugee crisis has caused among European citizens. This paper aims to analyse the integration lessons in the newest history of the Bulgarian state, focusing mainly on Muslim minorities, to display some of the good and bad practices and to produce reform suggestions. Because of what we have seen so far, it seems that we are not fit for the task. Otherwise how could we explain the widespread impression that instead of exposing and fighting the real causes for the ongoing migration tragedy, Europe is instead spending billions on the consequences of those processes? (Pachkova, 2015).

### ***2.1 Model and Data***

The authors have used data collected mainly by two empirical national representative researches: First by the Alfa research agency: "Attitudes of the Muslims in Bulgaria – 2016", and second by the Sova Harris agency: "Influence of the migrant's crisis to the Bulgarian society and Bulgarian policy: Fear, not hatred ". Both researches pointed out specific characteristics of the two large linguistic subgroups for the period of five years (2011-2016). The main conclusion is that considerable changes of attitudes and social status of the Muslim community in Bulgaria have not been made. Generally concerning the Bulgarian model of Muslim's integration, the authors identify that an attention is necessary to be paid to a certain

tendency of alienation to the Bulgarian state, which is more visible among the Muslims living in ghettos as well as among the Bulgarian Muslims (Pomaks).

### **3. Problem Solution**

#### ***3.1 Positive and Negative Trends of the Muslim Minorities' Integration from 1949 Till the Outbreak of the Refugee Crisis***

The data of the last census shows that the Muslim community in Bulgaria consists of different "sub-groups". The Muslim community in Bulgaria is the largest religious minority group in the country; it has remained within the boundaries of the Bulgarian state after the country's liberation from Ottoman rule in the second half of 19th century. Bulgarian Muslims are largely native-born and consist of different ethnicities such as Turks, Pomaks, Roma, Tatars, Cherkess, and Bulgarians. A small percentage of Muslims (about 15,000 people) are immigrants from other Muslim countries (Middle-East and Asia diasporas), who have settled mainly in the capital Sofia and the city of Plovdiv. The Turkish community is mainly the result of the Ottoman occupation of the country, lasting more than five centuries (from the end of the 14th century until 1878), and is concentrated in the South-West and the North-East of the country. Bulgarian Turks are in majority Sunnites and their mother language is the Turkish. The Pomak minority, also called Bulgarian Muslims, are considered to as Bulgarians who have been Islamized during the Ottoman occupation.

That is why on the one hand- Bulgaria has a large Bulgarian national majority, on the other a great mix of population- the two opposite characteristics describing the ethno cultural situation in the country. Many experts would say that it is the typical result of five centuries of coexistence between the Islamic and Christian civilization, which is present in the whole region.

Then, is it possible to have a particular model of integration only for Bulgaria? To answer this question is necessary to make a short historical research of the Bulgarian ethnic policies under and after socialist rule.

##### ***3.1.1 Historical Specifics of Integration Policy in Bulgaria***

During the five decades of socialist rule, there have been a multitude of policies towards the ethnic minorities. To simplify, they could be divided in three principal trends- recognition, integration and assimilation. (Nova, 2016). The first years of Socialism (1944-1955), were characterized by a common desire for emancipation, covering the whole civil society. It was the promise of the end of all dominations, including the one of the majority. In this particular context, the Bulgarian society opened to multiculturalism, and many initiatives, who encouraged recognition of cultural identities were settled. Theatres, media's, schools for minorities flourished everywhere, some even financed by the State. Measures of positive action have been also taken, and in the perspective of a future "Balkan federation", even the existence of a Macedonian identity was recognised. However, even if short, this period of "cultural recognition", was limited mainly to the ethnical recognition, not the religious' one. Though socialist rule changed its ethnic policies several times policies, religions – for the majority or the minorities- were all denied (Stancheva, 2002).

The second trend was the "integration period", which aimed to mobilize the society around a common identity, with no particular distinction of ethnic origins. The stress was put on the "society" and not the community, which had to be modernized through the Communist Party to ensure the development of the new "citizen". Illiteracy was almost totally eradicated and nomad communities settled down in towns to enjoy the benefits of modernity. This policy is

comparative to the French republican project, trying to unify the civil society around a political and social ideal (Krasteva, 2003).

The third policy was the “assimilation period”- the most radical one. Since 1958, the Communist Party hardened its attitude towards minorities, denying the Macedonian identity and closing all culturally connoted entities. There were still positive trends towards minorities in this period like quota for easy acceptance of Bulgarian Muslims at the universities, and accommodation in state owned apartment houses even for the gypsy minorities. The rapid and comprehensive industrialization of the country led to almost zero unemployment and eradicated extreme poverty. But in general this period was characterized by severe violation of the minorities’ rights, and also a general restriction of the civil rights of the majority. The most dramatic episode occurred from December 1984 to March 1985, when the Communist authorities launched an assimilation campaign against the Muslim minority in the country, aimed at the overt change of their identity and their ultimate “Bulgarisation”. This campaign, known as the “Revival process”, lasted until the autumn of 1989 and was admittedly considered among the main reasons for the fall of the communist government. It faced great and originally unexpected resistance of the Muslim communities, with many accidents and even deaths to deplore. Still today, the real reasons for this violent assimilation program, as well as the exact authors of the policy have not been cleared up.

But what doesn’t suffer any doubts, is that with the forced change of the Turkish names (even names of death people) the Communist party denied completely the notion of “private sphere”. Indeed, if something so personal and private as “names” could be easily changed by the government, nothing was left unattainable for the power. People were thus seen as “subjects” and not “citizens”, their identities and cultural belonging being shaped by the state (Krasteva, 2003, p. 160). This last wave of violence against the Turkish community caused in 1989 a massive exodus of more than 350 000 Bulgarian Muslims fleeing to Turkey, described as one of the largest migration since the end of the Second World War and strongly condemned by the international community. Though half of them returned to Bulgaria after the fall of the regime, this event provoked many tensions between the majority (suffering from a feeling of collective guiltiness), the government and the Turkish minority; accelerating the forming of the opposition (Barouh, 2001).

The 10th November 1989 signed the end of socialist rule. As consequence the country entered a long process of transition and democratisation, with major change in the political, economic and social spheres. First of all, it marked the beginning of a multi-plural political system, with the binary opposition between the “Reds” (former Communists) and the “Blues” (first a coalition of opposition, then the democratic party), as well as the appearance of a third actor- the MRF (Movement for Rights and Freedom), a party that set its main goal in defending the rights of the national minorities. Under the pressure of the public opinion and the international community, the new leadership of the socialist party was forced to “deny publicly” the “Revival process”. But there were also negative trends. Industrialization was replaced by deindustrialization. The lack of enterprises, the lack of jobs have driven big parts of the Bulgarian population in the group of so called “unnecessary people”. This was a result of educational degradation – educational decrease of the greatest part of the Bulgarian population, especially ethnic minority, returning to the eradicated illiteracy”. (Pachkova 2015)

Stigmatized as anti-Bulgarian for most of the transition period the MRF has played a major role in keeping the ethnic peace in Bulgaria. It gave Turkish and Muslim minorities its own political representation. Until now, the party has subtly managed to avoid political internal crises and always been well represented in the elections.



Globally, the strategy of the MRF aimed to ensure the loyalty of its voters on the communitarian base, trying on the same time to go beyond the unique “Turkish-identity” label. The ideological discourse justified mainly the pragmatic decisions of the party, which after 1992, supported the Socialist party (from 1993 to 1996), then the United Democratic Forces (from 1996 to 2001). On the same time, after 1996, the Party established a centrist position, in order to interfere in the binary logic of “communist-anti-Communist” parties, having the ability to form alliances with both sides (Ragaru, 2003).

The only real risk MRF can face is the disillusionment of its voters “who have reacted very positively until now” (Alfa research survey, 2016), becoming a more “traditional” party. It will not be able to hide behind the pretext of limited powers (because of its non-participation to the government) to justify his achievements.

### *3.1.2. Bulgaria as a Model for “Multi-cultural” State Policy Integration or Not?*

The main demands, expressed by the Muslim minorities have been dealt with in terms of political and not cultural rights, which avoided resentment on the part of the majority. But the positive effects the MRF has had over the consolidation of the Bulgarian democracy are counterbalanced by some less positive effects. The attitude towards other minorities is not the same, not all the minorities are treated as the Muslim have been, the process is extremely long, and needs mainly a change of mentality. The adoption of the National Framework for the Integration of the Roma in 1999 has led to a successful dialogue between the Roma and the Bulgarian government, and recently a Council on Ethnic and Demographic questions has been created. But this was just the beginning and the real implantation of the anti-discriminative measures will show what it is really worthy. In reality the situation is far from being perfect. Socio-economic distortions between majority and minority are flagrant, and even as a member of the European Union, Bulgaria remains one of the poorest countries in Europe. But furthermore, there are some really positive characteristics of the Bulgarian society acting for the country’s stability. First of all, the role of the “elites”. Having never had a strong civil society, the elites were the only ones to decide for the main direction of the transition. On the other hand, the still fresh memory of the Communist effort to assimilate the Turkish community at the end of the 80’s has contributed that the main political debate in 1989 turned around minority issues. Till this moment almost all parties in Bulgaria have shown evolution to more tolerance and real respect for minorities, the National Movement for Simeon II even invited representatives of the minority to enter the government (Kratseva, 2003). MRF’s role is becoming a model that other minority communities are trying to follow.

After considering the country’s view of ethnical groups, with mainly the Turkish community; and the policies towards them before and after Communism, we have to pronounce that the model isn’t simply in fact the Bulgarian “experience”. A model would need to deliver successful reconciliation, protect ethnicity and integrate all groups into the national community. Some good practises need to be observed in the political integration of the Muslim community, but social and economic differences still remain. And the exclusion of the Roma community, with growing racism all over Central and Eastern Europe is one of the big challenges for the respective authorities. If the problem is not dealt soon, the situation can become explosive, playing in favour of extremist parties. To counterbalance this phenomenon, an integrated approach, followed by appropriate legislation, strong implementation and clear information campaigns could help change the public mentality. The Bulgarian experience has shown that not every conflict in the Balkan irremediably leads to violence; moreover, there is no particular model to follow and every critical situation has to find its particular solution. Something very important in the Bulgarian “experience” of Muslim integration is the neighbourhood. Neighbourhood, as a universal social network of everyday practices, is able

to compensate for some of the tensions, but its influence remains confined within the framework of a contradiction in mass consciousness – the contradiction between a positive attitude to the neighbour who is of a certain religious confession and, at the same time, suspicion with regard to that religious community as a whole (Bosakov, 2010).

### ***3.1 Impact of the European Migration Crisis on the Bulgarian Society- Positive and Negative Lessons***

According to official Eurostat data from the third quarter of 2017, the number of first time asylum seekers from non-EU countries in the EU-28 sank back to the levels recorded in 2014, before the 2015 peak. Trends for destination countries remain the same, with Germany still remaining most preferred, with almost a third of all asylum applications, followed by Italy, France and Greece. At the other extreme, Bulgaria is one of the Member States with the largest drop in asylum applications compared to previous years. (Eurostat, 2017).

Drop rates for the Bulgarian state are high, but the base is generally low. Indeed, despite the fact that Bulgaria is an external border of the EU, the state as a whole was left aside from the main migratory flows and is mainly used a transit corridor for legal and illegal migration to Western Europe. Several factors contribute to this. First of all, Bulgaria and Romania are not Schengen members, so there is no possibility of moving from Greece to Western Europe without leaving the Schengen zone (Kyuchukov, 2016). Secondly, according to the so-called Dublin Regulation, all refugees, who are first registered in Bulgaria must remain in the country. If any of them manage to illegally reach another EU country, local authorities must send them back to Bulgaria, which is why many arrivals prefer to cross illegally Bulgaria in order not to be registered there (ClubZ, 2015). But perhaps the most important factor is, that in the information society era, even the fleeing from war have a vague idea that in the poorest country of Europe conditions for accommodation and nutrition, and especially for future integration are far from promising.

Despite the generally low levels of asylum seekers in the country during the peaks of the crisis, recent analyses show that Bulgarians have generally cultivated the attitude of seeing refugees as a threat, almost as a form of conquest, which could flood the depopulated from demographic problems territory at any time. This was partly accounted for by the mass media coverage of the incidents accompanying the main migratory flow and that of the frequent terrorist attacks in many European countries, carried out by young Muslims. Political and public speaking in the country also focused on the refugee crisis as a national security problem and a citizen's threat at the expense of the humanitarian side of the issue, thus also contributing to the formation of anti-refugee moods. Last but not least, public statements of the institutions over the period were divergent, often inadequately consistent, giving the impression of a lack of clear vision of the long-term solution to the problem (Kyuchukov, 2016).

Based on all these factors, several analyses and studies draw the following conclusions on the impact of the refugee crisis in Bulgaria:

- For the majority of Bulgarians (60%), refugees are a threat to national security (Kyuchukov, 2016: Sova Harris).
- 66% of the Bulgarians would not live in the same block entrance with a refugee and 59% don't want Gypsies as their neighbours (ClubZ, 2017: Trend).
- Nearly 5% of the people perceive refugees as a threat to themselves and say they hate foreigners (Kyuchukov, 2016: Sova Harris).

- 81% do not want to live next to a refugee camp (Capital, 2016: Alpha Research).
- 54% disagree, that Bulgaria should accept the respective quota of refugees, according to EU decisions (Kyuchukov, 2016: Sova Harris)
- 28% believe the EU should help refugees seeking asylum across Europe (Kyuchukov, 2016: Sova Harris).
- 76.3% are ready to help refugees with clothes or money (Capital, 2016: Alpha Research)
- 81% say yes to building of a system to select refugees outside the EU to obtain permission to enter its borders (Kyuchukov, 2016: Sova Harris)
- 49% of people believe that the most significant obstacle to the integration of refugees is the economic and social state of the Bulgarian state. (Kyuchukov, 2016: Sova Harris)
- 39% consider the integration of refugees to be impossible mainly because they have a different culture and religion and could not, in principle, integrate into our conditions. (Kyuchukov, 2016: Sova Harris)
- 57% share the view that the solution to the problem of refugees should be common to all countries within the EU (Kyuchukov, 2016: Sova Harris)

What can we learn from the Bulgarian experience? Although overall attitudes towards refugees are negative, some positive conclusions can still be drawn. First, despite the apparent inability of the European institutions to cope with the magnitude of the crisis, most Bulgarians are not in favour of a solution to the crisis, that would fit only Bulgarian national interests, but rather a common solution to the refugee problem, suitable for the whole Union. Regardless of the divergent and unclear signals from the state institutions and despite the repeated attempts to use the refugee crisis as an instrument for domestic policy purposes, in practice, Bulgaria adheres to a sufficiently consistent and pragmatic line of action on the refugee crisis. (Kyuchukov, 2016). Several consecutive Bulgarian governments after 2013 stand for a practically unified philosophy on one of the most complex and controversial elements of the crisis management measures - the construction of a protective wall along the Bulgarian-Turkish border. Bulgaria has been identified as one of the first countries to have built a similar facility at the EU's external borders without being a member of Schengen, at the same time refusing to do so at the internal EU border, between Bulgaria and Greece - despite strong domestic political and social pressure to do so (Kyuchukov, 2016). Which is again in line with the generally declared approach of the authorities to search for pan-European solutions, supported by the majority of Bulgarian citizens.

Secondly, a great number of Bulgarian citizens are willing to help refugees, and see obstacles to do so, not so much in the different ethnic and cultural identity, but in the inability of the Bulgarian state to provide suitable conditions for their accommodation and to solve the social and economic problems in their future integration into society. That is why we shouldn't be surprised that the Bulgarians are strongly opposed to the quota principle for the displacement of refugees, which the European Commission is trying to impose, but prefer the building of a system to select refugees outside the EU, "in strict control, new rules and clear conditions" (Kyuchukov, 2016).

#### **4. Conclusion**

As already mentioned, the current European crisis has two main dimensions: political and economic. Whether we take Spengler's pessimistic analysis of an ongoing decline of the

European civilization for granted or not, it is clear that external factors alone, such as the financial crisis brought by America or African migratory waves, cannot lead to a decline of the European Union if it is not previously shaken on the inside. United Europe is obliged to help those in distress who see it as their only hope for survival, not only due to of the humanitarian values on which it was constructed. But because through its consumerist way of existence, dating back to the colonial past and continuing to present, is to no lesser extent responsible for depriving the African continent of valuable resources without which the future of its growing population is doomed to conflict and misery. Last but not least, also because Europe took active participation, including by military, in the destabilization of migratory barrier states like Iraq, Libya, Syria, Tunisia, Egypt and others (Manov, 2015).

If we all Europeans should have a shared responsibility, so we should also exchange experiences on crisis management, positive or negative ones. From the latest Bulgarian history we can learn that the integration of minorities or migrants cannot be solved successfully when only economic issues are tackled without affecting political ones or vice versa. For example, in most of the socialist period a high quality of life was ensured for Bulgarian national minorities, through accessible and quality education, healthcare, recreation and professional development. But at the same time, they were deprived of political rights and representation, and subjected to violent and short-sighted assimilation, which ultimately led to building of enormous social tensions. During the so-called transition to democracy and market economy, Bulgarian Muslims and Roma received political rights and representation, but with the exception of a small elite, they fell into illiteracy, which led to unemployment and marginalization. The high social costs that the Bulgarian state is forced to spend on the day to day survival of minorities, especially the Roma, are a fruitful ground to fuel xenophobic moods and social conflicts. This can explain the negative attitude of the majority of Bulgarians towards refugees, seeing in them only new communities of which the state will have to take care of.

Interpreting the brilliant British historian Arnold Toynbee, we can conclude that crises are not necessarily something devastating (Bogomilova, 2016). On the contrary, according to Toynbee, finding successful responses to crises like the present ones is basic precondition for the continuous ascent of the European civilization. Similar to this, some authors state, that in response to crises, communities often decide to move to a higher level of integration. (Tendera-Wlaszczuk, 2016).

In order to deepen European integration, it is necessary to find an appropriate response to the political and economic challenges that we are facing. For crisis solving Toynbee calls upon creative personalities, similar to him Lev Gummiyov relies on "passionary" leaders (Manov, 2016). From the unsuccessful responses to the recent crises, it is clear that we can not only rely on the creativity of the Brussels government and administration. We need the passionate creativity of the whole European population, old and new member states alike, and future ones also. In order to involve as many European citizens as possible in the political processes, Europe needs further democratisation, drawing on the consensus of all its inhabitants, which at the same time would not threaten the autonomy of individual nation-states. (Nenička, 2016). After all, who knows, maybe some of the passionary creative people that we need, are among today's migrants and refugees.

## **References**

- [1] Alfa Research agency (2016). "Attitudes of the Muslims in Bulgaria – 2016" Sociological data analyses [online]. [cit.2018-02-8]. Available

- at:[http://alpharesearch.bg/bg/socialni\\_izsledvania/socialni\\_publikacii/osnovni-rezultati-ot-proekt-naglasi-na-myusyulmanite-v-balgariya-2016.876.html](http://alpharesearch.bg/bg/socialni_izsledvania/socialni_publikacii/osnovni-rezultati-ot-proekt-naglasi-na-myusyulmanite-v-balgariya-2016.876.html).
- [2] Balabanov, A. (2017). *Modern migration waves to Europe – a clash of civilizations or struggle for resources?* [online]. [cit.2018-02-26]. Available at: <http://notabene-bg.org/search.php?author=%C0%F1%E5%ED%20%D1%F2%E5%F4%E0%ED%EE%E2%20%C1%E0%EB%E0%E1%E0%ED%EE%E2>.
- [3] Barouh, E. (2001). *Les tâtonnements du “modèle” Bulgare. Le Monde Diplomatique.* [online]. [cit.2018-02-8]. Available at: <http://www.monde-diplomatique.fr/2001/05/BAROUH/15112>.
- [4] Bogomilova, N. (2016). *“West” within philosophical – historical perspective* [online]. [cit.2018-02-26]. Available at: <http://notabene-bg.org/read.php?id=357>.
- [5] Bosakov, V. (2009). *Identity and Diversity of Islam in Bulgaria.* Sofia (in Bulgarian).
- [6] Bosakov, V. (2010). *Integration of Muslims in Bulgaria.* Sofia: Ivrai (in Bulgarian).
- [7] Capital (2016). *Sociological data analyses [online].* [cit.2018-02-8]. Available at: [https://www.capital.bg/politika\\_i\\_ikonomika/bulgaria/2016/04/17/2744426\\_alfa\\_risurch\\_nad\\_50\\_ot\\_bulgarite\\_odobriavat/](https://www.capital.bg/politika_i_ikonomika/bulgaria/2016/04/17/2744426_alfa_risurch_nad_50_ot_bulgarite_odobriavat/).
- [8] Club Z (2015). *Graphics [online].* [cit.2018-02-8]. Available at: [https://clubz.bg/28451-bejancite\\_v\\_bylgariq\\_kolko\\_kakvi\\_i\\_ot\\_kyde\\_sa\\_grafiki](https://clubz.bg/28451-bejancite_v_bylgariq_kolko_kakvi_i_ot_kyde_sa_grafiki).
- [9] Club Z (2017). *Graphics [online].* [cit.2018-02-8]. Available at: [https://clubz.bg/60111-bylgarite\\_naj\\_ne\\_haresvat\\_bejancite\\_sledvat\\_gejove\\_i\\_romi](https://clubz.bg/60111-bylgarite_naj_ne_haresvat_bejancite_sledvat_gejove_i_romi).
- [10] Eurostat (2018). *Statistics [online].* [cit.2018-02-8]. Available at: <http://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20180223-1>.
- [11] Eurostat (2017). *Statistics [online].* [cit.2018-02-8]. Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum\\_quarterly\\_report](http://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_quarterly_report).
- [12] Koprinarov, L. (2016). *The migratory pressure of the European Union: Causes and Prospects* [cit.2018-02-8]. Available at: <http://notabene-bg.org/read.php?id=408>.
- [13] Koprinarov, L. (2016). *The Euroscepticism and Thomas Theorem* [cit.2018-02-8]. Available at: <http://notabene-bg.org/read.php?id=377>.
- [14] Krasteva, A. (1999) *Identities, discourse, power.* Sofia: Petekston, (in Bulgarian).
- [15] Krasteva, A. (ed) (2004) *From ethnicity to migration.* Sofia: NBU, (in Bulgarian).
- [16] Krasteva, A. (2003) *“The ethnic policy in Bulgaria” in “Bulgaria and the European integration”:* Bruxelles.
- [17] Kyjonková, L. (2014). Regional Disparities and Cohesion in the EU. In *International Conference on European Integration.* Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 417 – 418.
- [18] Kyuchukov, L. (2016). *Impact of the refugee crisis on the Bulgarian society and the Bulgarian Policy: fear, but not hatred.* [cit.2018-02-26]. Available at: <http://library.fes.de/pdf-files/bueros/sofia/12571.pdf>
- [19] Manov, B. (2015). Reread Spengler: Has the Modern West Declined? *In Dialogue East-West: Bidirectional readings.* pp. 189-189.

- [20] Manov, B. (2016). *The migration motive*. [cit.2018-02-23]. Available at: [http://ppm.swu.bg/media/44509/manov\\_b\\_%20migration.pdf](http://ppm.swu.bg/media/44509/manov_b_%20migration.pdf)
- [21] Nenička, L. (2016). The migration and the Search for European Identity. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 656.
- [22] Nová, M. (2016) Migration – Models and Principles of Immigrant Integration. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 674.
- [23] Pachkova, P. (2015). Economic nature of Islamic and Christian fundamentalism. In *Dialogue East-West: Bidirectional readings*. pp. 205 – 214.
- [24] Pachkova, P. (2015). Transition and Desecularization. *Restructuring of political and ideological space in Bulgaria, Europe and the world*. Pp 303-314
- [25] Ragaru, N. (2003). Les visages de l’Islam en Bulgarie , Regards sur l’Est [cit.2018-02-8]. Available at: [http://www.regard-est.com/home/breve\\_contenu.php?id=404](http://www.regard-est.com/home/breve_contenu.php?id=404).
- [26] Stancheva, A. (2001). *Les minorités nationales en Europe Centrale et Orientale*. [cit.2018-02-8]. Available at: <http://www.robert-schuman.org/synth25.htm>.
- [27] Tendra-Właszczuk, H. (2016) Analysis of the Sources of the European Union Crisis. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 1011.
- [28] Wilkinson, R., Pickett, K. (2015), *Why Greater Equality Makes Societies Stronger*’ Richard Wilkinson and Kate Pickett, bestselling authors of “*The Spirit Level: Why Equality is better for everyone*”. [cit.2018-02-8]. Available at: <https://www.slideshare.net/gaiamuffin/why-greater-equality-makes-societies-stronger-richard-wilkinson-and-kate-pickett-bestselling-authors-of-the-spirit-level-why-equality-is-better-for-everyone>.

## **Impact of China on Competitiveness of EU Steel Industry (Slovakia)**

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### **Abstract**

*The development on the global commodity markets is influenced by the expansion of Chinese companies. On the import side, they have a decisive impact on the many input raw material prices, and on the export side, PRC applies its domestic comparative advantages and economic strategy supporting the export of domestic production. It concerns the labour cost, energy cost, transportation costs and many other forms of support. As the essential part of its growth strategy, the European Union supports own energy safety, focused especially on efficient use of renewable energy sources. This involves a significant increase of costs and more complex conditions of its use. For these reasons, the European industry is losing its competitiveness and is being pushed out of domestic as well as international markets. The aim of this paper is to study the above stated connections and based on an international comparison of production conditions in the steel industry identify the competitive (dis)advantages of the EU in this segment and formulate the authors' statements concerning the future of this sector in its industry.*

**Keywords:** *chinese economy, competitiveness, energy security, european steel industry*

**JEL Classification:** *F01, F10, F47, E62*

### **1. Introduction**

The world economy, which is under the pressure of globalisation, has been constantly showing large-scale changes in its functioning. This applies to all its territorial segments and commodity components as well as the intensity of international exchange. When only assessing the last decade of its development robustly affected by the international financial crisis and its consequences, it is evident that the rate of its interdependence on China's economic development had grown not only in terms of export-import flows of goods and services, but it also significantly affected the commodity markets themselves. It was not prepared for changes in demand for inputs required by the primary sector, and therefore, as a matter of course, the further development had a significant impact not only on the prices of such commodities and the conditions of their supply, but also on the direction and intensity of the territorial flows, which had a major impact on international markets. P. Krugman (6) in 1994 warned of the possible risks of a development in which the Asian economy would increasingly prevail, adding that: „*The extraordinary record of economic growth in East Asia has powerfully influenced the conventional wisdom about both economic policy and geopolitics. Its success demonstrate three prepositions: major diffusion of world technology in progress, the world's economic gravity is shifted to Asia and that the superiority of these economies works with fewer civil liberties and more planning than the west have been willing to accept.*“ It did not take the consequences of such direction of the Chinese economy a long time to manifest

themselves. In 2009, China became the world's largest exporter of goods, and in 2015, it also outstripped the United States in terms of the total volume of GDP generated (in terms of purchasing power parity).

The process of inversion in the international positions of the United States and China was accompanied by a similar trend in the inflow and outflow of foreign direct investments (FDIs), where China, together with its satellites Hong Kong, Singapore and Taiwan (the so-called Greater China) also became dominant. However, the territorial direction of FDIs was different from its major export-import flows. While their inflows chiefly from multinational corporations took advantage mainly of cheap labour, then after 2010, the production and export of products with higher value added began to predominate quickly. China's investment outflows were strategically different. Even in 2000, it was a net exporter, for example, of oil and coal and exported electricity. However, the rapidly growing production required increasingly greater supplies of these and other raw materials. Therefore, the expansion of Chinese state-owned companies to Angola, Tanzania, Sudan, Venezuela, Colombia and Brazil, etc., was aimed at acquiring and using new extraction capacities to effectively cover the growing domestic demand. In the last decade, the Chinese demand "sucked" half of the world's exports of coal and iron, but China quickly became the world's largest consumer of, for example, copper, aluminium, zinc, coltan, lithium, gold and silver (Baláz, 2012). Its rapidly growing imports of oil and energy commodities offset, to some extent, the declining supplies to the United States, which triggered a wave of euphoria on commodity exchanges and ultimately increased demand for mining and transport capacities, but in a relatively short period of time China began to produce them itself (Baláz, 2010).

The economic growth of China, which had exceeded 10% per year on average over the past three decades, was primarily the result of the huge development of capacities in the primary industry. In this context, Y. Wu (12) confirmed that primarily fixed investments served as a decisive factor in China's economic growth: *„There is no doubt that the high fixed investment over 50 % of GDP had made substantial contribution to China's GDP growth over the past three decades. In comparison with other major economies in the world, China's domestic consumption accounts for a relatively small share of GDP.”* It is clear that the domestic consumption in China is determined by the income level of its population and the low level of wages that did not allow it to grow (Wu, 2009). The supporting structure of the first stage of this unique economic growth was the Chinese steel industry. Its enormous capacity was used to implement grandiose programs in the field of the construction of new transport infrastructure, motorways, railroads, unique bridges, airports, flats or administrative buildings. In the last decade, the Chinese industry covered half of its global consumption. This was associated with the huge consumption of coal and coke, including electricity, the import of which accounted for almost half of their import on a global scale. As long as this production was only consumed to ensure its dynamic development. Disproportions in international markets predominantly related to fuel prices, notably oil, gas, precious metals, copper, or the deepening of trade deficits in the exchange of goods (Fojtíková, 2014).

After 2011, it seemed that both the U.S. and the EU had already adapted to the unfavourable consequences of the international financial crisis and restored their economic progress, due to which it was expected that the international equilibrium in the global commodity markets would be restored. The Chinese economy also contributed to this as its growth rate declined slightly and its foreign trade results and domestic consumption growth opened up new opportunities for both European and American exporters. At the end of 2014, it turned out that the whole recovery process was fragile and risky. First the US Federal reserves (FED) and later the unitary European Central Bank (ECB), resorted to quantitative easing and "pouring" billions of dollars into their economies in order to maintain a certain positive growth trend. In



2016, some economic stabilisation came about, but the cyclical risks in international financial and commodity markets remained. The crucial role was played by the Chinese economy, but a decline in its economic growth as a natural expression of the end of the stage of its own industrialisation and the resulting changes in the structure of internal consumption were reflected in lower demand in commodity markets. This resulted in a sharp fall in the prices of most raw materials and semi-fabrics. For instance, the price of coking coal dropped from about \$200 to less than \$50 per metric ton; and the same happened to iron scrap and metals. This was a disaster for their largest exporters. Just for that reason, Australia' GDP and that of Indonesia decreased by 2% and 1%, respectively, in 2015. In the first half of 2016, imports of coal from the US declined by 60% on a year-over-year basis, imports from Canada by 46%, and imports from Russia by 26% (WSA, 2017). This trend has had a far-reaching impact on the entire steel trade, and also "rolled out" into the other segments of the world economy. The increase of exports of steel products, by which Chinese companies responded to a decline in the domestic demand, taking advantage of the low costs of labour, energy and coal, triggered off panic on both sides of the Atlantic. The introduction of anti-dumping measures evoked by the European steel producers - Eurofer or the US State Administration proved to be ineffective. On the other hand, they induced the introduction of similar protective measures against the whole range of products imported to China from the EU or the United States. And although there is no doubt that it is a "vicious circle" of connections and dependencies, and its beginning and end are likely to be found in the Chinese economy, the situation confirms that it will be the EU who will "suffer" for not utilising the stabilisation period in the global economy to undergo a structural transformation towards the production of high technologies and a fundamental reform of its unitary economy. This way it could have contributed to the restoration of its international competitiveness (Vošta, 2010).

## **2. Problem Formulation and Methodology**

Developments in the global commodity markets show that due to the extent of demand and the territorial structure of imports, they are under the growing influence of the expansion of Chinese companies. These have a significant or almost decisive impact on the prices of most raw material inputs. In their subsequent consumption and production of finished products, the People's republic of China (PRC) applies its internal comparative advantages and economic strategy supporting the export of domestic products. This includes not only lower labour, energy and transport costs, but also various other forms of support for placing such goods on international markets. For the EU, industrial production has long been a crucial part of its growth strategy while seeking to exert its original comparative advantages when exporting it. Structural changes are mainly based on the increasing use of renewable energy sources, which entails a considerable increase in costs and more complex conditions for the industrial use of such energy sources. It is the energy prices that have a higher cost level in the overall algorithm forming the final price of steel which is the subject of investigation as a central manufacturing input for industry, compared to Chinese producers. Therefore, the EU is losing its competitiveness in those market segments where it is unable to apply any alternative comparative advantage, notably innovation, know-how or other commercially usable scientific and research outputs (Astrov, 2015 and Sturm, 2017). China's increased production as such was "dragged" primarily by the needs of its own growing economy as well as exports, which rose from 27 mil. (13% of world exports) in 2005 to 108 mil. tons - 36% of world exports)-in 2016, with EU exports falling from 41 mil. (19% of world exports) to 30 mil. tons (10% of world exports) in the reporting period. The decline in EU production was affected by a decrease in consumption per capita due to an increased standard of life and by high production costs. Developments in the international steel market have prompted, since 2015, the

introduction of a number of protective measures against Chinese imports of crude steel, on the account of it being accused of anti-dumping or using unfair methods in the pursuit of its commercial interests (Melecký, 2013). Developments in the international crude steel market show that there are several significant trends and changes in the territorial distribution of the centres of production and consumption of this material.

**Table 1: Production of the Steel (in mil. tons)**

	2000	2005	2008	2010	2012	2014	2015	2014 vs 2008	2015 vs 2000
EU	193	196	199	173	169	169	166	-15%	-14%
China	129	356	512	639	731	823	804	61%	526%
Japan	106	112	119	110	107	111	105	-7%	-1%
U.S.	102	95	92	80	89	88	79	-4%	-23%
Russia	59	66	69	67	70	71	71	4%	20%
Brazil	28	32	34	33	35	34	33	1%	19%
India	27	46	58	69	77	87	89	51%	231%
Other	205	246	262	263	283	286	273	9%	33%
<b>Total</b>	<b>849</b>	<b>1148</b>	<b>1343</b>	<b>1433</b>	<b>1560</b>	<b>1670</b>	<b>1620</b>	<b>24%</b>	<b>91%</b>

Source: Author's calculations from WSA (26).

The aim of this paper is to examine the above-mentioned connections and to identify the competitive (dis)advantages of the EU in this segment on the basis of an international comparison of production conditions in the steel industry, and to subsequently formulate the authors' opinions on the future of this sector in the context of the further development of European industry as to its competitiveness and the possibility to defend its positions in the international steel market in the future. As there are no comprehensive indicators available to assess the competitiveness of the steel industry, we have focused on the assessment of energy costs through the RUEC (Real Unit Energy Costs) indicator and of the international competitiveness of the steel industry through the RCA (Revealed Comparative Advantage) indicator. RUEC is calculated as the ratio of energy costs to value added (both indicators in current prices). It expresses the amount of energy costs needed to achieve one unit of value added. The RCA index compares the ratio of the export share of the country's steel industry to the its total exports, and the share of total exports of the steel industry to the total world exports.

**Figure 1: World Export of Steel (percentage of whole export)**

World export of the steel in 2005 according to countries according to countries

World export of the steel in 2016



Source: Author's calculations from WSA (26)

### 3. Problem Solution

The competitiveness of steel production in the PRC and the EU is based on a number of internal comparative advantages, with the overwhelming part of them being based on full-scale direct and indirect application of the benefits of cheap labour, consistent economic and foreign trade policy or long-term work experience or highly efficient organisation of work. The indicators used give us more precise information on how and in what the costs of production (focusing on energy prices) differ and how they affect the international competitiveness of steel and steel products. The RUEC indicator can be expressed as the product of the average real unit price of individual energies and the energy demands of the industry or of the whole industry (Sturm, 2017). The energy demands are calculated as the ratio of the amount of energy consumed to the value added expressed in constant prices (due to the need to have the value added net of inflation, exchange rate fluctuations, etc.). On the other hand, average unit energy costs are calculated on the basis of current prices in order to monitor changes in the quantity and price of energy inputs consumed as well as the ability of a particular industry to reflect them in the prices of its products or in the value added generated.

$$RUEC = \frac{EC}{VA_{current}} = \frac{EC}{VA_{const} * PVA} = \frac{EC}{QE * PVA} * \frac{QE}{VA_{const}} \quad (1)$$

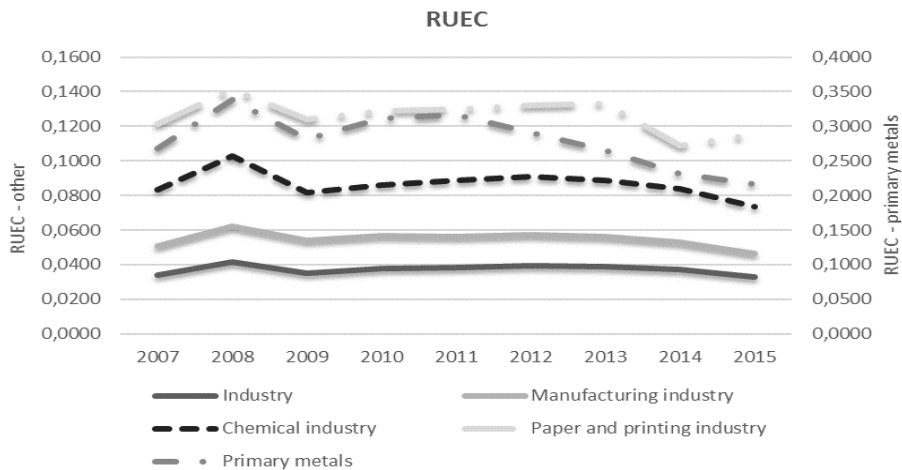
where:

*EC* – energy costs in current prices*QE* – quantity of energy consumed*PVA* – deflator of value added*VA<sub>current</sub>* – value added in current prices*VA<sub>const</sub>* – value added in constant prices.

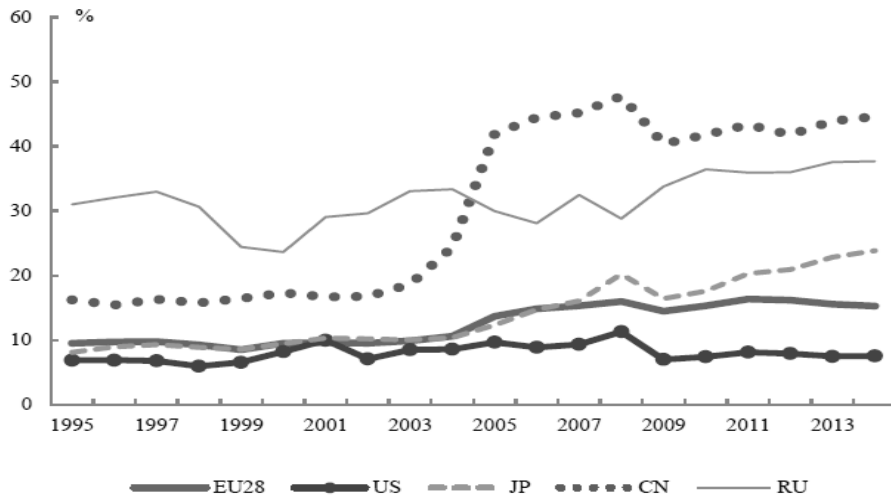
During the period from 2007 to 2015, the RUEG (EG) indicator declined by 2.55% for the whole industry, but by as much as 19.17% for the processing industry (primarily metals - steel). Taking into account other energy costs, the RUEC indicator of the EU processing industry reached the second lowest value after the US. China and Russia had been reaching the highest values in the long term. Figure 3 shows a clear upward trend in this indicator, while in the EU and the US it was stable after 2008. The highest RUEC values were reached in the industry of primary metals, the chemical industry and the industry of non-metallic minerals. In these sectors, only Japan and China have higher values of this indicator. The US shows the lowest

RUEC values for all industries and, therefore, has the greatest competitive advantage. In terms of development in time between 2010 and 2014, only the EU and the US were able to maintain stable values. The EU achieved the stability of this indicator despite rising energy prices by restructuring its economy towards lower energy consumption. The US, where the commodity prices were higher due to more costly slate oil and natural gas extraction, increased labour productivity and benefited from various tax reliefs. China, the EU, Japan, the US, Russia, Brazil and India have all the share of export of the processing industry in the total exports of individual countries greater than that of the world's processing industry in the global exports, resulting in their competitive advantage vis-a-vis other countries.

**Figure 2: RUEC (EG)<sup>5</sup> of EU Industry and Selected Branches (2007 – 2015)**



**Figure 3: RUEC of Primary Industry in Selected Countries (1995 – 2013)**



Sources: Calculations from EEA (11), Eurostat (12), IEA (17), WSA (26) and EC (9)

<sup>5</sup> Real Unit Energy Costs for electricity and gas, only.

China had long been maintaining the greatest competitive advantage due to its low cost level, followed by Japan, which, on the other hand, primarily benefited from its advanced technologies. These countries even managed to increase their competitiveness slightly (Yongnian, 2017). The EU reached the third best RCA indicator, which, however, fell due to restructuring the EU economy towards industries and services consuming less energy, which consequently resulted in a decline in the production and export of the processing industry (Gespeicher, 2011). The RCA index used provides more information on the development of the competitiveness of a particular country and its comparison with other countries:

$$RCA_i = (X_{ij} / \sum X_j) / (X_{i world} / \sum X_{world}) \tag{2}$$

where:

$RCA_i$  means the revealed comparative advantage of product  $i$

$X_{ij}$  means the export of product  $i$  by country  $j$

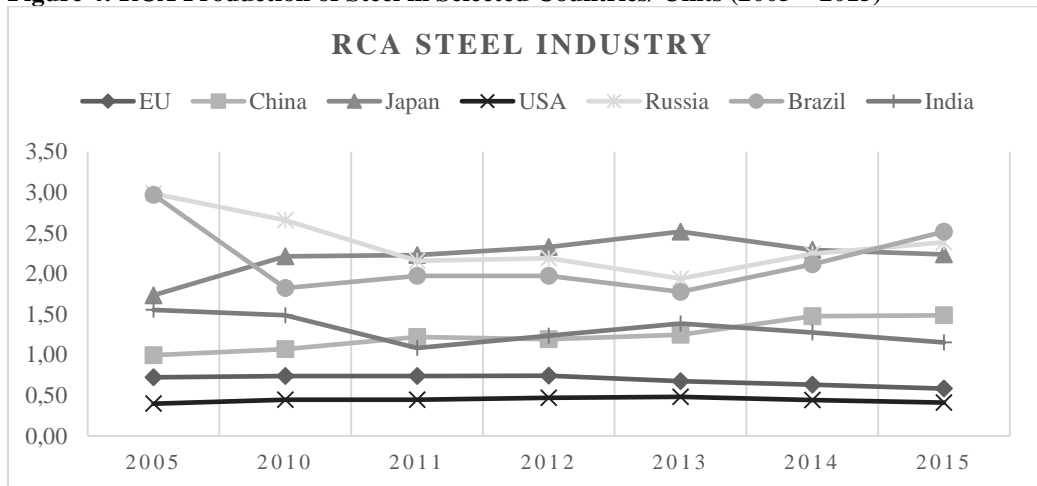
$\sum X_j$  means the sum of exports of country  $j$

$X_{i world}$  means the world export of product  $i$

$\sum X_{world}$  means the total world export

The results of the calculations in Figure 4 shows that the EU and the US do not have a competitive advantage in the RCA production of steel – the values are lower than 1.0 (3). During the reporting period, the EU RCA continued to fall slightly from 0.72 in 2005 to 0.58 in 2015, while the US at least managed to maintain its competitive advantage, expressed by the RCA indicator, at approximately 0.40. Other countries have a competitive advantage in steel production ( $RCA > 1$ ), with Japan, Brazil and Russia reaching high values; in the case of Russia, it was undoubtedly thanks to low domestic commodity prices.

**Figure 4: RCA Production of Steel in Selected Countries/ Units (2005 – 2015)**



Source: Author’s calculations from Eurostat, (13), Reuters (25) and WSA (26).

China sought to improve its competitive advantage through various forms of export support and various subsidies, and so the EC decided to impose anti-dumping duties ranging from 30.7% to 64.9%. This should reduce the negative value of the EU's trade balance with China,

when the volume of EU imports equals roughly four times its exports to China. Its amounted to 1.3 mil. tons of steel in 2017, with imports from China totalling 6.4 mil. tons of steel (WSA). The bilateral trade in steel and steel products between the PRC and the EU is therefore marginal in terms of the total bilateral trade volume and ranges between 2% and 4%. Therefore, the implemented measures are, in our opinion, rather a form of political "marketing" than an important element in the EU's adaptation to the development of the world commodity markets.

#### **4. Conclusion**

The results presented in this paper confirm that the process of globalisation has a major impact on the world economy. This is also evident in the developments in the international commodity markets. The volume of production in the primary and secondary sectors has been growing in the long term, accompanied by changes in the importance of individual countries in terms of exports and imports of individual commodities. China produces almost 50% of the world steel volume, with the EU reaching 10% and the US only 7%. This distribution shows the importance of this commodity to domestic economy, but on the other hand the efforts to export its surpluses are equally intense. A strong correlation between input prices and the growth of competitiveness in the primary sector, particularly in the production of steel, which was the subject of the analysis, was proved. This shows that steel prices are substantially influenced by the prices of the main inputs: iron, coke, coal and electricity, but in many countries they are influenced by the economic policy and the intensity of various support measures, in particular as for exports. The importance of steel industry in the world will increase in connection with the growing urbanisation and environmental protection. From this aspect, it is possible to expect that trade protectionism will continue in this way. The individual areas of the processing industry vary considerably in terms of cost structure, the consumption of individual types of energy, and the shares of individual countries in the total consumption or in exports. Steel industry is the industry with the highest consumption of energy, the cost of which has and will have the most significant impact on it (Blonigen, 2007 and Dohrn, 2013).

The EU and the USA recorded a revealed comparative disadvantage in the steel sector and were the most often the participants of trade disputes about protectionism. China recorded the most significant increase of its share in the global steel production and trade, although it also recorded a revealed comparative disadvantage in the steel sector. Then it is obvious that the main producers and exporters of steel and steel products, who did not have a revealed comparative advantage in steel export in the monitored period, carried out a bit unfair trade practices and became the most often the participants of trade disputes in the WTO (Fojtíková, 2016). Our forecasts suggest that if there is no significant increase in the prices of iron and steel products, including the price of the other inputs, in the world markets on the one hand, and the EU does not carry out an extensive sector-wide reform to minimise production costs, modernise the sector and implement significant innovations with a visible impact on the cost level on the other hand, the importance of this sector will decline rapidly and the production will be substituted by imports of steel from countries that have the necessary comparative prerequisites and are able to apply them effectively in the growth of the international competitiveness of this production (Bolotov, 2013).

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## References

- [1] Astrov, V., Pindyuk, O., Leitner, S.M., Pöschl, J. and Stehrer, R. (2015). *Energy Efficiency and EU Competitiveness: Energy Costs and their impact on Manufacturing Activity*. Research Report 405, Vienna: The Vienna Institute for International Economic Studies, p. 96.
- [2] Baláž, P. and Bayer, J. (2015). A Paradigm Shift in EU Competitiveness Strategy. In *Central and Eastern Europe in the changing business environment*. Bratislava: Vydavateľstvo EKONÓM, 2015, pp.
- [3] Baláž, P., Szökeová, S. and Zábajník, S. (2012). *Čínska ekonomika : nová dimenzia globalizácie svetového hospodárstva*. Bratislava: Sprint 2.
- [4] Baláž, P. and Zábajník, (2010) Contemporary development of the commodity markets-consequences and challenges for revitalization of world economy *Ekonomický časopis*. Bratislava: SAV. Vol. 58, No. 9,
- [5] Blonigen, B. A., Liebman, B. H. and Wilson, W. W. (2007). Trade policy and Market Power: The Case of the US Steel Industry. *NBER Working paper* No. 13671.
- [6] Bolotov, I., Čajka, R., Gajdúšková K. (2013). *Economic Development of the EU new member states*. Prag: Oeconomica.
- [7] Centre for International Competitiveness. The European Competitiveness Index Series [online]. 2017. Available at: <http://www.cforic.org/pages/european-competitiveness.php>
- [8] Dohrn, R. and Kratschell. (2013). Long Term Trends in Steel Consumption. *Ruhr Economic Papers*. Working paper.
- [9] EC-European Commission. DG Trade Statistical Guide (2016). Printed in Luxembourg and Belgium: Publications Office of the European Commission, ISBN 978-92-79-52794-4.
- [10] Ecofys (2015). *Electricity costs of Energy Intensive Industries: An international comparison* [online]. Berlin, p. 75 Available at: <http://www.ecofys.com/files/files/ecofys-fraunhoferisi-2015-electricity-costs-of-energy-intensive-industries.pdf>
- [11] EEA-European Energy Agency. Renewable energy in Europe (2016). Printed in Luxembourg and Belgium.
- [12] Eurostat. Energy production and imports [online]. Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy\\_production\\_and\\_imports](http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy_production_and_imports)
- [13] Eurostat. Electricity price statistics [online]. Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Electricity\\_price\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Electricity_price_statistics).
- [14] Gespeicher, A., Arens, M. and Eichhammer, W. (2011). *Zukunftsmarkt Energieeffiziente Stahlherstellung-Fallstudie im Rahmen des Vorhabens „Wissenschaftliche Begleitforschung zu übergreifenden technischen, ökologischen, ökonomischen und strategischen Aspekten des nationalen Teils der Klimaschutzinitiative“*. Fraunhofer Institut für System- und Innovationsforschung (ISI), p. 63.

- [15] Fojtíková, L. (2014). Comparison of the Steel Demand Between the European Union and China. *Tanger. 23rd International Conference on Metallurgy and Materials*, pp. 1485-1490.
- [16] Fojtíková, L. (2016). Trade Specialisation and Protectionism in the World Steel Trade (2016). *Tanger. 25th Anniversary International Conference on Metallurgy and Materials*, pp. 1695-1700.
- [17] IEA-International Energy Agency. *World Energy Outlook 2016*. Paris: IEA Publications, Available at: <http://www.indicators.odyssee-mure.eu/energy-efficiency-database>. Html
- [18] Krugman, P. (1994). The Myth of Asia's Miracle. *Foreign Affairs*. Vol.73, Issue 6, Nov/Dec.
- [19] Marlene, A., Schleich, J. and Worrel, E. (2012). Energy intensity development of the German iron and steel industry between 1991 and 2007. *Energy*. Elsevier Ltd., vol. 45, No. 1, pp.786 – 797.
- [20] Melecký L. and Staničková, M. (2013). Konkurenceschopnost Evropské unie v procese globalizace světové ekonomiky. *Současná Evropa*. Praha: Oeconomica.
- [21] Sturm, Ch. Inside the Energiewende: Policy and Complexity in the German Utility Industry. *Issues in Science and Technology*. Dallas: University of Texas at Dallas, 2017, Vol. 33, No. 2, p. 9.
- [22] Vošta. M. (2013). Energetická (ne)soběstačnost Evropské unie versus Čína, Praha: *Současná Evropa*, No. 3.
- [23] Yongnian Z. and Xin L. (2017). The Changing Geopolitical Landscape, China and the World Order in the 21st Century. *China: An International Journal*. Volume 15, Number 1, February, pp. 4-23.
- [24] Wu, Y. (2009). Growth and Investment Efficiency in China. *EAI Background Brief*. No. 459, p. 7.
- [25] Reuters (2017). Available at: <https://www.reuters.com/finance/commodities>
- [26] WSA-World Steel Association. *Statistic Report (2017)*. Available at: <https://www.worldsteel.org/steel-by-topic/statistics/steel-statistical>



## The Antitrust Compliance in Management Strategies of Enterprises – the European Perspective

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### **Abstract**

*Due to the negative consequences of cartels for the economy, the priority for anti-trust bodies in the European Union has been the fight against cartels of enterprises. Current case law practice shows that the use of the system of "negative" repressive tools, mainly financial penalties, in relation to enterprises that committed cartel practices is not sufficiently effective. The need to use 'positive' tools is increasingly emphasized by promoting the building of business management strategies based on a culture of compliance with competition rules. This role can be played by the antitrust compliance program originating from the American practice. The article has a theoretical and cognitive character. In the theoretical part, the antitrust compliance scheme and tools that are necessary to build a management strategy based on it are characterized. In the practical part, the functioning of the antitrust program in selected European enterprises is discussed, this part is based on the case-study method.*

**Keywords:** cartels, compliance, European competition policy, risk management

**JEL Classification:** M10, M14, K21

### **1. Introduction**

Competition is the main determinant of economic development. It is not only a condition for the effective functioning of the market, but above all guarantees consumer welfare. For this reason, competition policy plays a special role among all European Union (EU) economic policies, mainly with regard to achieving the objectives of economic integration within the internal market. In the global economy, EU competition policy is primarily intended to strengthen the EU's industrial and commercial potential so that it can compete with the world's major trading partners (Mynarzová, Kaňa, 2014). It also serves European consumers through a guarantee of maintaining competitive prices offering a wide selection of high-quality goods and services and is to be an incentive and guarantor for enterprises not only European ones to operate and invest in the EU internal market (Blecharz, Štverková, 2017, Skowron-Grabowska, Mesjasz-Lech, 2016). It is extremely important in this respect to comply with the rules of competition policy both by the member states and entrepreneurs themselves and by creating an effective system of enforcing its provisions (Kordoš, 2016). Out of all competition policy violations, the most dangerous for the economy are business cartels because due to their secret and long-term nature they often distort competition through its complete elimination, limitation or violation. For this reason, cartel agreements are subject to special rigors of antimonopoly supervision, both of the European Commission and national antitrust authorities. In practice however, cooperating companies often unintentionally create cartel relations between themselves, thereby exposing themselves to the risk of violation of competition law and related financial sanctions as well as the risk of loss of reputation and

trust of business partners (the so-called antitrust risk). The antitrust compliance system defined as a system of ensuring compliance of the company's policy and strategy with the competition rules aimed at eliminating the risks associated with it is a relatively new tool on the basis of the European Union which aims to eliminate the antitrust risk in the enterprise.

## **2. Problem Formulation and Methodology**

The aim of the article is to define the mechanism of antitrust compliance and to define its place and importance in business management strategies, with particular emphasis on enterprises operating within the EU internal market. The research starts with the relevant literature, documents review to highlight the framework for implementation of antitrust compliance in management systems in the company. The study identifies also the areas in which the enterprises are particularly vulnerable to antitrust risk. For this research the author used the basic methods of the scientific research to obtain information necessary for the complex and systemic explanation of the issue. The research methods include mainly the analysis of literature, documents and legal acts applicable here. One of the qualitative research methods was used - the case-study method. This method enabled extensive analysis of the studied phenomenon and better understanding of the processes taking place in its course. The case study was based on observations and business reports. The criterion for selecting the examined enterprise was based on its long term experience in application of the anti - trust compliance mechanism, on a unit scale and on the scale of the entire capital group to which it belongs.

The article is a continuation of research conducted by the author in the area of cartel cooperation of enterprises and the related antitrust risk (Barcik, 2017, Barcik, 2016, Barcik, 2016).

### **2.1 Theoretical Background**

Antitrust compliance is one of the elements within the entire Compliance Management System (CMS). CMS is usually defined as the entirety of measures and processes in the company, which are aimed at detecting the risk of non-compliance and managing it in such a way as not to infringe the existing legal and internal regulations of the enterprise and act in accordance with them. In this context, CMS is also perceived as a value-based system aimed at creating and maintaining a long-term compliance culture, i.e. high awareness of employees at all levels in the company, so that they know what regulations may apply in a given area of their activity and how to behave in appropriate situations, to follow them (Kaptein, 2011). The basic task of CMS is to identify and properly manage the risk of non-compliance and on this basis, to make the selection of appropriate elements that will be part of the system. In the above sense, Compliance goes beyond the scope of only legal risk and includes the entire organizational culture of the company, the strategy of social responsibility and the ethical code of the company at the forefront. Increasingly CMS is perceived as a determinant of the company's competitiveness increase in relation to other entities on the market, mainly due to the fact that it positively affects the company's credibility as a safe business partner (Makowicz, 2015). The CMS concept derives from the practice of Anglo-Saxon countries, mainly the USA, where initially it was associated primarily with such regulated sectors as the banking sector and the insurance sector. Then, thanks to the activities of global corporations, which, while implementing CMS, simultaneously included all of their organizational structures of subsidiaries and branches, compliance policy began to become more and more popular among enterprises in the European Union. The CMS idea is also in line with the current trend of pro-quality management of the company, which is currently in force in the management strategies

of European enterprises, mainly in the area of effective risk management through its proper identification and elimination (Jakubiec, 2017, pp.11-24, Dziwiński, 2016). For this reason, in some countries, CMS audits are becoming more and more common in order to obtain certificates of compliance of a given system with the requirements of a given standard. Currently, there are two standards on the international arena that contain compliance quality standards: ISO 19600 Compliance Management Systems and ISO 37001 Anti-Bribery Management Systems (ISO 19600: 2014, ISO 37001: 2016).

Antitrust compliance by entering the company's CMS focuses on an internal business strategy aimed at preventing and eliminating risky anti-conceiting behaviors in the company. In EU, antitrust compliance has become part of a broader idea that the European Commission has identified as the European compliance culture. It assumes that market participants will be convinced of the need to act in accordance with legal regulations, ethical and industry standards. In order to implement the compliance mechanism in European competition policy, the Commission developed a document published in November 2011 *Compliance matter. What companies can do better to respect EU competition rules*: It defines compliance programs as a set of rules and procedural rules implemented by the company, defining requirements for employees to undertake activities compliant with competition law, especially on the basis of anti-cartel regulations, and creating a system to control its compliance, the Commission stressed that their creation leads to an increase in the level of competition law protection and facilitates the detection of its infringements (European Commission, 2011). The Commission's position in the above-mentioned matter was supported by the European Parliament, proposing the introduction of anti-competitive behavior of enterprises into the EU antitrust authorities' policies taking into account their antitrust compliance programs (European Parliament, 2011).

### **3. Problem Solution**

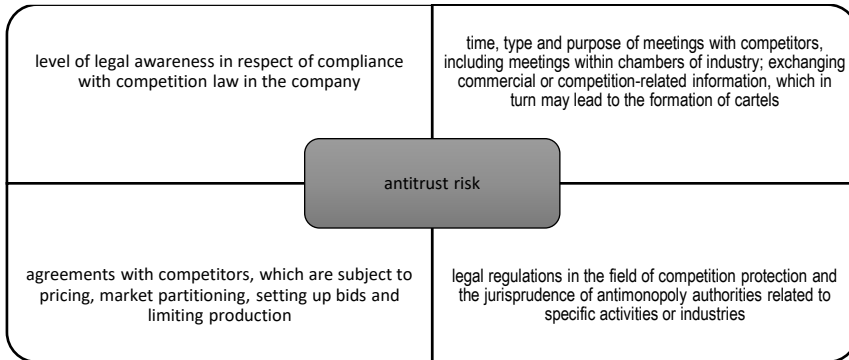
The doctrine emphasizes the fact that there is no single universal antitrust compliance system. Its effectiveness and efficiency depends on its ability to adapt it to the strategy and market position and the needs of a specific company. In other words, antitrust compliance, just like the entire CMS, should be created individually for a specific company (Gozman, Currie, 2014; Bethell, Valente, 2012). This approach is also due to the complex and latent character of business agreements that take on a diverse form of cartel cooperation that is usually based on informal coordination mechanisms. As a rule, cartels take the form of horizontal agreements between competitors and serve to coordinate market behavior mainly by dividing the market according to territorial, assortment and subjective criteria, and include types of agreements which are listed in Art. 101 paragraph 1 of Treaty on the Functioning of the European Union which are as follows: fixing directly or indirectly the purchase or sale prices of goods, determining other than the price transaction conditions, market partitioning, quotation agreements; limiting progress and investments, agreements with exclusion effect, information exchange (Treaty on the Functioning of the European Union, 2010).

#### ***3.1 Antitrust Risk Management and Implementation of Antitrust Compliance***

The antitrust compliance system should serve the effective management of anti-trust risk in the enterprise. Antitrust risk includes the probability of incurring material and intangible losses as a result of violation of one of the normative rules of the competitive order: freedom to compete, equality of enterprises competing on the markets and fairness of competition. The antitrust risk depends largely on external factors independent of the enterprise, which mainly

include the dynamic development of often complex antitrust regulations and the related instability of the applicable law, as well as the lack of uniform criteria and tools for antitrust supervision, mainly in the field of economic analysis. The antitrust risk may arise both from the obvious breach of competition rules related to the obvious violation of the prohibition of a specific action or from undertaking business activities that are not prohibited but may potentially have an anti-competitive effect. For this reason, it is necessary to analyze factors that increase the likelihood of anti-competitive behaviors (Figure 1).

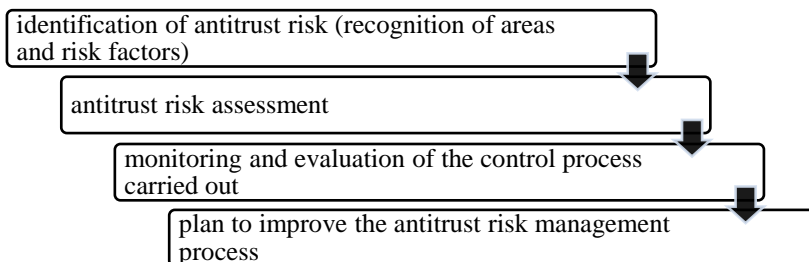
**Figure 1: Sources of Antitrust Risk in the Enterprise**



Source: Barcik (2016)

Thanks to the implementation of antitrust compliance, it is possible to achieve a reasonable level of risk reduction that is to minimize the probability of occurrence of problematic behaviors. An important role in this process should be played by the Compliance Department in the company, headed by the Compliance Officer, whose competences include, first of all, the implementation of the compliance program covering current tasks and control activities with risk identification and assessment. In addition, monitoring and evaluation of the undertaken activities together with an analysis of their effectiveness and development of recommendations on this basis aimed at improving the entire process, which is the elimination of identified deficiencies in the antitrust compliance program (Paha, 2017). The process also includes the urgent implementation of new solutions or the improvement of existing ones with the specification of the time frame and an indication of how to monitor them further. (Figure 2).

**Figure 2: Antitrust Compliance – The Antitrust Risk Management Process in the Enterprise**



Source: Barcik (2016)

Monitoring and evaluation of risk management procedures and controls should cover all areas of the company's activity and all levels of employees. Based on the recommendations of the Competition Commission of the International Chamber of Commerce, it is assumed that these activities should focus mainly on monitoring individual employee behavior in terms of compliance with antitrust rules, analyzing reports prepared by the Compliance Department on the knowledge, understanding and observance of procedures related to antitrust risk inside enterprises and monitoring of industry associations with which the company is related, as well as the activities of the company and employees in these associations. The effectiveness of the entire implementation process of antitrust compliance in the enterprise depends not only on the adoption of the control forms and actions taken but also on the effective communication strategy of the Compliance Department with the management and employees at various levels. In relation to employees it is important to raise awareness of antitrust risk along with propagating the antitrust compliance culture in the company (Competition Commission of the International Chamber of Commerce 2013).

### ***3.2 Antitrust Compliance in Strategy of ArcelorMittal***

#### ***3.2.1 Characteristics of the Enterprise***

ArcelorMittal Poland is part of the global steel LNM Holdings, which in 2004, under the privatization agreement concluded with the Ministry of Treasury took over the Polish steelworks that were failing at that time and restructured them and restored financial liquidity in the following years. Currently ArcelorMittal Poland is the largest steel producer in Poland employing over 11,000 employees in six branches in the Śląskie, Małopolskie and Opolskie voivodships. Thanks to investments, the value of which has been over PLN 6 billion since 2004, ArcelorMittal Poland is today one of the most modern steel producers in Europe. ArcelorMittal Poland gathers approx. 70 percent production potential of the Polish steel industry. It is also one of the largest Polish exporters and the largest coke producer in Europe and the entire ArcelorMittal group. The business strategy of the company is based on three values: sustainable development, quality and leadership. Thus the key place in the company's strategy is occupied by business responsibility based on the following assumptions: providing employees with a safe, healthy and friendly work environment, producing products that promote a more sustainable lifestyle and create sustainable infrastructures, efficient use of natural resources and high recycling rates, responsible use of environment and limiting the impact on water, soil and air quality, commitment and active participation in the life of local communities (ArcelorMittal Poland 2018).

#### ***3.2.2 Arcelormittal Antitrust Compliance Program***

The obligation to comply with competition rules, including in particular antitrust rules was adopted by ArcelorMittal Poland in the Code of Ethics. This applies to the activities carried out by all holding companies based on the laws of all the countries in which the company is present. Detailed guidelines in the scope of antitrust compliance also include a periodic amendment to the document of 2007 entitled ArcelorMittal antitrust compliance guidelines for Europe, which defines the various elements of the company's antitrust compliance program. The main goal of antitrust compliance in ArcelorMittal Poland is to help identify problems and obtain a state of full compliance with antitrust rules. The areas of ArcelorMittal's activities covered by the antitrust compliance program are: contacts with competitors, agreements with clients and suppliers, and the area entitled "precision of the written word". In particular, the area dedicated to contacts with competitors was regulated. The complexity of risk in this area

results from the fact that the usual economic pressure exerted on all competitors on a given market often results in parallel behavior on the global market. And although these parallel behaviors may be lawful, they attract the attention of antimonopoly authorities and may be the reason for the investigation, in particular when such behavior is accompanied by contacts with representatives of competitors. For this reason, the company's employees are obliged to avoid any contact with competitors that could justify the suspicion and presumption of collusion. This regime includes not only individual contacts with competitors, but also membership and participation in trade associations, market insights and benchmarking. Within the second area, particular caution should be maintained in activities related to, among other things, setting the customer's pricing policy, dividing the market into sales territories or customers, passive sales outside the sales territory assigned to a sales company or resale sales and prohibiting the sale of products competing with the imposed trading company or dealing with resale. The area of "precision of the written word" obliges the employees to be precise when preparing correspondence regarding matters being the object of competitive activity and competition of the company and to draw up internal notes and correspondence using a clear, concise and precise style without using hyperbole. The compliance program is responsible for the antitrust compliance program, which is managed by the Compliance Officer. Its activity is based on the strategy of transparent communication principles and reporting on identified irregularities to the management board. The promotion of the antitrust compliance culture mainly includes periodic antitrust compliance training and the whistleblower institution, mandatory for employees at all levels. (ArcelorMittal Poland 2018).

#### 4. Conclusion

To sum up the above considerations and analysis, all the companies irrespective of industry, size or market power are at risk of violating the EU competition policy rules. For this reason, it should be assumed that the antitrust compliance program should be an integral part of the management strategy of every enterprise in the EU internal market. It should be implemented in a comprehensive and adequate way for a specific company. Especially since the company itself is a source of antitrust risk, in addition to the environment and external events, as demonstrated in this study. According to the author, Antitrust compliance allows not only effective recognition, assessment and monitoring of antitrust risk, but also contributes to the increase of awareness and the need to consider competition rules when making any business decisions. Thanks to this, antitrust compliance has the potential to become an effective tool to promote behaviors in line with EU competition policy. The considerations regarding the implementation of antitrust compliance programs taken up in this article do not exhaust the topic, which is due to the insufficient recognition of this issue on the European ground. The direction of the author's further research will focus on the effectiveness and efficiency of antitrust compliance programs in European companies of all sizes and competing in different markets.

#### References

- [1] ArcelorMittal Poland. Compliance Programme. [online]. [cit.2017-02-20]. Available at: <http://poland.arcelormittal.com/en/corporate-responsibility/transparent-governance.html>
- [2] ArcelorMittal Poland.. ArcelorMittal antitrust compliance guidelines for Europe. January 2007 [online]. [cit.2017-02-20]. Available at: [http://poland.arcelormittal.com/fileadmin/content/03\\_odpowiedzialnosc/03\\_odpowi](http://poland.arcelormittal.com/fileadmin/content/03_odpowiedzialnosc/03_odpowi)

- edzialnosc/projekty\_spoleczne/Program\_zgodnosci/Compliance\_programme/Antitrust\_Compliance\_Guidelines\_for\_Europe.pdf
- [3] Barcik, A. (2016). Co-opetition of Enterprises in Terms of the European Competition Policy. In Kovářová, E.L. Melecký and M. Staničková (eds.). *Proceedings of the 3<sup>rd</sup> International Conference on European Integration 2016*. Ostrava: VŠB- Technical University of Ostrava, 2016, pp. 65-71. ISBN 978-80-248-3911-0.
- [4] Barcik, A. (2017). Współpraca kartelowa przedsiębiorstw w strukturach sieciowych. *Marketing i Rynek* No 7, pp.32-25.
- [5] Bethell, O. and Valente, M. (2012). Development in Antitrust Compliance. Compliance Programs: How Efficient are They Really?, *Concurrences Journal*, No. 2 Business compliance with competition rules, [online]. [cit.2018-02-20]. Available at: [http://ec.europa.eu/competition/antitrust/compliance/businessseurope\\_compliance\\_en.pdf](http://ec.europa.eu/competition/antitrust/compliance/businessseurope_compliance_en.pdf)
- [6] Blecharz, P. and Štverková, H.(2017). Consumer preferences due to the quality and price. In Štefan Majtán a kolektív: *Aktuálne problémy podnikovej sféry 2017*. Ekonomická Univerzita v Bratislave.Bratislava: Ekonom., pp.105-111. ISBN 978-80-225-4422-1.
- [7] Dziwiński P. (2016). Restructuring of Small and Medium-Sized Enterprises – the European Perspective. In Kovářová, E.L. Melecký and M. Staničková (eds.). *Proceedings of the 3<sup>rd</sup> International Conference on European Integration 2016*. Ostrava: VŠB- Technical University of Ostrava, 2016, pp. 190-196. ISBN 978-80-248-3911-0.
- [8] European Commission, *Compliance matter. What companies can do better to respect EU competition rules*, Competition, Special first edition, November 2011, Belgium.
- [9] European Parliament resolution of 20 January 2011 on the Report on Competition Policy 2009, para 60. [online]. [cit.2018-02-20]. Available at: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2011-0023+0+DOC+XML+V0//EN&language=EN>
- [10]Gozman, D. and Currie W. (2014). The role of rules-based compliance systems in the new EU regulatory landscape: Perspectives of institutional change. *Journal of Enterprise Information Management*, Vol. 27 Issue: 6, pp.817-830, <https://doi.org/10.1108/JEIM-05-2013-0023>
- [11]International Organization of Standardization, ISO 19600:2014; [online]. [cit.2018-02-20]. Available at: <https://www.iso.org/standard/62342.html>.
- [12]International Organization of Standardization, ISO 37001:2016; [online]. [cit.2018-02-20]. Available at: <https://www.iso.org/standard/65034.html>.
- [13]Jakubiec, M. (2017). *Projakościowe zarządzanie przedsiębiorstwem*. Difin, Warszawa. ISBN 978-83-8085-313-3.
- [14]Kaptein, M. (2011). Toward Effective Codes: Testing the Relationship with Unethical Behavior. *Journal of Business Ethics*. vol. 99, iss.2,pp. 233–251, <https://doi.org/10.1007/s10551-010-0652-5>.
- [15] Komisja Konkurencji Międzynarodowej Izby Handlowej 2013).Zestaw narzędzi ICC do tworzenia programów przestrzegania prawa konkurencji. Praktyczne narzędzia do tworzenia programów przestrzegania prawa konkurencji dla małych,

- średnich i dużych przedsiębiorców [online]. [cit.2018-02-20]. Available at: [https://www.iccpolska.pl/site/public/upload/files/dokumenty/zestaw\\_narzedzi\\_icc\\_d\\_o\\_tworzenia\\_programow\\_przestrzegania\\_prawa\\_konkurencji.pdf](https://www.iccpolska.pl/site/public/upload/files/dokumenty/zestaw_narzedzi_icc_d_o_tworzenia_programow_przestrzegania_prawa_konkurencji.pdf).
- [16] Kordoš M. (2016). Effects of the EU Competition Policy and Strategy Europe 2020 Symbiosis. In Kovářová, E.L. Melecký and M. Staničková (eds.). *Proceedings of the 3<sup>rd</sup> International Conference on European Integration 2016*. Ostrava: VŠB- Technical University of Ostrava, 2016, pp. 472-479..ISBN 978-80-248-3911-0.
- [17] Makowicz, B.(2015). The effective practitioner. The Global Compliance Management System: a practical approach to compliance across cultures. *Baltzer Science Publishers 2015. Business Compliance*, 4, No. 6, pp. 35-44.
- [18] Mynarzová, M. and Kaňa, R. (2014). Theory and Practice of Industrial Policy of the EU in the Context of Globalization Challenges. In: Honová, I. et al. (eds.). *Proceedings of the 2<sup>nd</sup> International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, 2014, pp. 499-507. ISBN 978-80-248-3388-0.
- [19] Paha, J. (2017). Antitrust Compliance: Managerial Incentives and Collusive Behavior. *Managerial and Decision Economics*, vol. 38 iss. 7, pp. 992-1002.
- [20] Skowron-Grabowska, B., Mesjasz-Lech, A. (2016). Konkurencyjne uwarunkowania zarządzania zasobami kadrowymi w przedsiębiorstwach w kontekście dostępu do rynku pracy, *Przegląd Organizacji*, nr 10, pp. 22-28.
- [21] Treaty on the Functioning of the European Union - Consolidated version (2010). *Official Journal C 326, 26/10/2012 P. 0001 – 0390*, [online]. [cit.2018-02-20]. Available at: <http://eur-lex.europa.eu/legaccontent/EN/TXT/?uri=celex%3A12012E%2FTXT>.



## **Industry 4.0 as the Determinant of Enterprises' Development in the European Union**

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### **Abstract**

*The Industry 4.0 on the one hand opens up new opportunities for enterprises in the European Union, on the other hand, it entails threats related to the digitization of the economy and the security of functioning in cyberspace. Industry 4.0 means that companies need to change the business model to a fully digital one. Thus, joining in the process of digital transformation requires the company to have a comprehensive approach covering all its areas of activity. In the European Union, the concept of industry 4.0 has been a reality for several years, especially for companies in the automotive, steel and production industries, mainly in the field of production of electronic equipment or production of plastic products. The main objective of the study is to present the assumptions and determinants of the Fourth Industrial Revolution taking into account the European perspective. The research method used in the study is the case-study method, which are selected European enterprises.*

**Keywords:** digital transformation of enterprises, economy of European Union, Industry 4.0

**JEL Classification:** L60, O10, O52

### **1. Introduction**

Revolution means the process of rapid changes in a given field that causes a fundamental transformation of the state of affairs in which they function. In the common sense it is a "big change" moving from one stage of development to another. With regard to industry its evolution in the economies of individual European Union countries this process is called the "fourth revolution", and using the production language - Industry 4.0. Industry 4.0 is a combination of several technologies, mainly digitalization which are intended to significantly increase the efficiency in production processes. As the first, the term "industrial revolution" was used by historian Arnold Joseph Toynbee in his book "The Industrial Revolution" from 1884 while recognizing that the industrial revolution is a process of rapid technological, economic and social change (Toynbee, 1884/2017, Olender-Skorek, 2017). The various phases of the revolution were characterized by specific economic and technological changes. The first industrial revolution (1784-mid - 19th century) was characterized by mechanization i.e. steam engines and mechanical control, and initiated the mechanization of production. The second revolution (late 19th century-1970s) was connected with the introduction of electricity. Mass production was started with the use of electricity. The symbol of the third revolution (1970s - today) has become automation, which enabled the introduction of automated devices into production factories, as well as various types of software, such as SCADA, MES, ERP and programmable PLC controllers which enable not only diagnostics but control and simultaneous supervision over ongoing processes. The fourth revolution which has been developing more or less since the beginning of the XXI century is characterized by broadly

defined digitization that is, modernity based on Internet access, ICT networks and above all, the use of this to manage machines in the real process (Neugebauer, Hippmann, Leis, Landherr, 2016).

The EU industrial policy is currently one of the most strategic economic policies and the industrial sector remains the main driver of growth and employment in the EU Member States (Mynarzová, Kaňa, I 2014, Mesjasz-Lech, 2016). Although only about 1 out of 10 companies in the EU are classified as production enterprises the industry is one of the key elements of sustainable development for the EU economy and brings an added value to the economy mainly due to the process of converting materials to produce products. According to the European Commission's Digital Transformation of European Industry and Enterprises report from 2015, this sector covers 2 million companies and guarantees 33 million jobs. It is also responsible for over 80% of exports and 80% of private research and innovation (European Commission, 2015). For these reasons, Industry 4.0 is one of the biggest challenges and chances to maintain and increase the competitiveness of the European Union economy.

## **2. Problem Formulation and Methodology**

The main purpose of this study is to discuss the basic assumptions of the 4.0 revolution with particular emphasis on the implications that result from it for the economy of the European Union and its Member States and the indication of its practical implementation in selected European enterprises. Implementing the research goal, the thesis was formulated as follows: Implementation of Industry 4.0 is currently one of the strategic goals for economies and enterprises in the European Union. At the same time, the following research hypotheses were formulated:

Hypothesis 1: joining in the process of digital transformation requires the company to change the management strategy and to have a comprehensive approach covering all its areas of activity.

Hypothesis 2: the effectiveness of implementing Industry 4.0 solutions in EU enterprises, especially small and medium enterprises, requires institutional support and a comprehensive approach both at the level of the EU institutions and national programs.

The article has a theoretical and cognitive character. In the theoretical part the issue of the fourth industrial revolution with its basic concepts, elements and course was discussed. In the practical part, selected European enterprises were analyzed, which are an example of implementing solutions typical for the fourth revolution. The analysis of current literature and relevant documents as well as case studies was used to implement this target as research methods. The choice of the case study research method in the empirical part of the study allowed a detailed analysis of the practical implementation of Industry 4.0 solutions, including: objectives, assumptions, motives of actions taken. The research tool used in the case studies was the analysis and assessment of business reports.

## **3. Problem Solution**

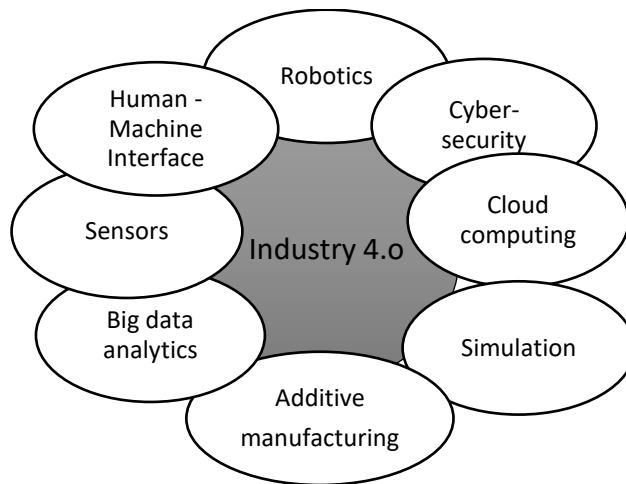
### ***3.1 The Main Assumptions of the Industrial Revolution 4.0***

The term "Industry 4.0" functions all over the world in the language of both business and technology, often alongside or interchangeably with the terms Internet of Things (IoT), or Industrial Internet of Things (IIoT) Smart Factories, Smart Industry, or Advanced Manufacturing. It was used for the first time in 2011 in the high-tech strategy project of the government of Germany promoting the computerization of manufacturing processes. Industry

4.0 should be defined through a whole range of new and innovative technological solutions that are related to it. According to the European Parliament these are as follows:

1. “The application of information and communication technology (ICT) to digitize information and integrate systems at all stages of product creation and use (including logistics and supply), both inside companies and across company boundaries”;
2. “Cyber-physical systems that use ICTs to monitor and control physical processes and systems. These may involve embedded sensors, intelligent robots that can configure themselves to suit the immediate product to be created, or additive manufacturing (3D printing) devices”;
3. “Network communications including wireless and internet technologies that serve to link machines, work products, systems and people, both within the manufacturing plant, and with suppliers and distributors”;
4. “Simulation, modelling and virtualization in the design of products and the establishment of manufacturing processes”;
5. “Collection of vast quantities of data, and their analysis and exploitation, either immediately on the factory floor, or through big data analysis and cloud computing”;
6. “Greater ICT-based support for human workers, including robots, augmented reality and intelligent tools” (European Parliament 2015).

**Figure 1: Key Technical Solutions and Technologies of Industry 4.0**



Source: own work based on Soldaty (2017)

The digitized production leads to many changes in production processes, results and business models. Intelligent factories allow for greater production flexibility. Automation of the production process, transfer of product data during its passage through the production chain and the use of configurable robots means that many different products can be produced in the same production unit. This mass customization allows the production of small batches due to the ability to quickly configure machines to adapt to the specifications provided by the customer and the production of additives. The speed at which the product can be produced will also improve. The integration of product development with digital and physical production was associated with a significant improvement in product quality and a significantly smaller number of errors (see box). Productivity may also increase due to various Industry 4.0 effects. Thanks to advanced analyzes in predictive maintenance programs, manufacturing companies can avoid machine failures in the production hall and reduce downtime (Westkämper, 2014).

Customers will be able to be more involved in the design process, even supplying their own modified designs, which can then be quickly and cheaply produced. Industry 4.0 will also cause changes in business models. Instead of only competing for costs, European enterprises can compete on the basis of innovation in the scope of the ability to produce customized projects or quality (European Parliament 2015).

Undoubtedly, the success of Industry 4.0 depends on a number of complex factors and the process of implementing solutions connected with it in practice encounters many barriers. First all changes in the area of cooperation and investment activity of enterprises should be mentioned. They are connected with the necessity to build a new, complex value network and to produce and distribute goods / services in a flexible way, including building new business partnerships. The cooperation should cover not only suppliers and distributors but also new partners such as technology companies, telecommunications and Internet infrastructure providers, including competitors (Bauer, Haemmerle, Schlund, et al., 2015). It is also important to implement appropriate legal regulations mainly related to intellectual property rights, employee supervision and product liability. Another challenge is the obligation to determine the ownership of the data held and guarantee their security as part of making it available to partners cooperating in the same network. In the discussed area, attention is also paid to the need to adopt uniform standards covering the process of data exchange between machines, systems and software within the value chain, as well as the challenges faced by employees. Industry 4.0 companies need specialists, especially programmers, data set analysts and cyber security experts. (Westkämper, 2014, European Parliament 2015).

### ***3.2 Fourth Industrial Revolution from the Perspective of the European Union***

Bearing in mind the strategic importance of Industry 4.0 for the economy, the EU undertakes numerous initiatives to support the development and implementation of this idea in Member States (Kollár Melková, 2016, Mynarzová, Kaňa, II 2014). In the first place, the European Parliament in its resolutions advocated the need to support small and medium-sized enterprises in the production of high added value and technologically advanced and underlined the need to reindustrialize the EU economy (European Parliament 2012, 2013). Similarly, the European Commission emphasizes in its documents many times that “*digital technologies (including cloud computing, big data, new industrial internet applications, smart factories, robotics and 3D printing) are essential to increase European productivity through redefining business models and creating new products and services*” (European Commission 2014). At the same time, the Commission recognized areas related to Industry 4.0, such as advanced production, key enabling technologies and intelligent networks and digital technologies as one of the six priority challenges for the EU economy. At the same time, the objective of increasing the share of total value added production in the EU to 20% by 2020 has been defined (European Commission 2012). In addition, the Commission has set up a strategic policy forum on digital entrepreneurship, the main objective of which is the digital transformation of European industry and enterprises. However, the Commission's strategy for the digital single market presupposes the need to guarantee at EU level the protection of data ownership and interoperability in communication between enterprises and machinery (European Commission 2105). Initiatives related to the Industry 4.0 sector are financial from various European Union programs. One of the main features here is the Horizon 2020 research program, in which EUR 80 billion is earmarked for the development of advanced, intelligent, digital production in the EU, as well as for research and innovation, primarily in relation to the development of key enabling technologies. However, Member States have the option of applying for funds from the European Structural and Investment Funds (ESIF) which are intended primarily to invest

in regions that support the development of industry 4.0, focusing on innovation in line with the concept of "smart specialization" (European Parliament 2015).

Among the EU Member States, Germany, France, Italy and Great Britain are most involved in the ideas of Industry 4.0. In the case of Germany, the creation of Platform Industrie 4.0 deserves special attention in this respect. Within which the private, public and academic sectors for the development of industrial technologies in Germany cooperate. The platform is one of the ten initiatives of the German government in the field of industry 4.0, which has already received over EUR 200 million (Platform Industrie 4.0). In France, as part of the Industrial Support Program, financial aid is directed in particular to small and medium-sized enterprises that initiate and implement projects in the field of digitization, robotics and energy efficiency. A factory of the Future was also opened, it is a kind of demonstration center. Similarly in Italy, support under the Fabbrica del Futuro project was directed mainly at initiatives related to the improvement of quality, flexibility and individualization of production. In the United Kingdom, among the government initiatives related to the promotion of Industry 4.0, it is worth to mention the "Catapult centers" manufacturing centers, which are designed to help enterprises access the research and expertise related to advanced innovative production and process technologies. Especially for enterprises from the SP sector, services in the field of industrial consulting are dedicated (European Parliament 2015). In the other Member States, especially Poland, characterized by weaker economic potential, the implementation of Industry 4.0 is quite a challenge. It started later and is based largely on the experience of the EU countries mentioned above. For example, in Poland this year, the Polish Platform Industry 4.0 will be launched. Its main priority is to be reindustrialization as one of the main elements in the Polish Government Strategy for Responsible Development and the main indicator of its effectiveness will be the level of digitization and robotization of Polish industry. (Ministerstwo Rozwoju 2017).

**Figure 2: Industry 4.0 in European Union**



Source: European Commission (2017); Digital Single Market. European countries join forces to digitize industry. [online]. [cit.2018-02-22]. Available at: <https://ec.europa.eu/digital-single-market/en/news/european-countries-join-forces-digitise-industry>

### **3.3 Examples of Practical Applications of Industry 4.0 In European Enterprises**

A model example of Industry 4.0 solutions, and thus a pioneer of its solutions in the EU, are the BHP Bosch factories, which produce automotive components. Located in German Blaichach and nearby Immenstadt, they employ a total of over 3,400 people, and it is also the

only German factory that increases employment. Already after the structure of employees you can see how advanced the facility is. As many as 23% of employees in Bhp are planners, constructors and managers with higher education, and 42% are highly qualified employees, technical managers and technicians. The branch of the Bhp factory in Immenstadt is involved in the production of, among others, ABS, ESP, iBooster systems and multi-purpose cameras used in the automotive industry, as well as in electric vehicles and using different levels of autonomy. He also deals with cross-sectional functions, specialized machines, and as a model plant development of production processes. There is also a showroom in its area. Located in nearby Blaichach, the factories produce sensors and ESP and ABS components as well as compressor components (Bosch Mahle Turbo Systems). In addition, there is a training center and hydroelectric power plant supplying energy to part of the plants. Bhp plants also produce production lines for their own organization, all production lines in the Blaichach and Immenstadt factories were produced on site. The breakthrough moment for the Bhp factory was 2006, when it became the model plant of Bosch Production Systems and 2013, in which the concept of Industry 4.0 was included in the strategy according to which Blaichach/Immenstadt is developed. This process has been gradually being implemented since then. It includes standardization of manufacturing processes, creation of network infrastructure that combines machine control systems and 100% acquisition of data from machines and production processes. These efforts have already resulted in the creation of production benchmarks concerning individual machines as well as entire production lines, not only on the spot but also in plants integrated around the world, which are integrated with Bhp. Data that is obtained in a non-site is used to analyze processes, and thus to optimize and develop production. ActiveCockpit solutions manufactured by Bosch Rexroth are used for this. The main place for gathering information and communication at the machine-man level are Bosch Rexroth ActiveCockpit solutions. They constitute a virtual platform for processing and visualization of production data, use the Internet and cloud computing, thanks to which everything happens in real time. Using various types of interfaces from traditional HMIs, through tablets, laptops, to large touch screens, it is possible to quickly display data, associate with each other and analyze it. Excellent insight into performance indicators and the ability to compare current and historical data is also possible. ActiveCockpit is connected to the ERP system, which allows for uniform production management and logistics. Industry 4.0 solutions are also visible in factory logistics. In this case, a system of tracking raw materials and products was used, including there is an automatic registration of trucks and containers with goods transported to the production area. Large RFID gates are used here that allow automatic recording of information related to transport between the warehouse and production (Bosch 2018).

The Polish example of the implementation of industry solutions 4.0 is the company POLMO S.A. providing elements of sheet metal and efficient teams for the automotive market for over 70 years. The company is located in Brodnica, approx. 150 km southeast of Gdańsk. In 2015. the company set out to expand the modernization activities of buildings and machines that were to shape its new face. Internal reorganization and new, effective production and work processes were to ensure long-term and positive competitiveness on the European market. The plants produce a wide range of high quality spare parts and accessories for the automotive industry. The basis of the assortment are steel fuel tanks and compressed air tanks for vehicles such as trucks, trailers, semi-trailers and buses. The company's management, in response to the growing quality requirements set by customers, decided to invest in comprehensive robotization and automation of the welding line for compressed air tanks, which are the basis of the company's assortment. From the business side, the goal of the investment was to increase the plant's production capacity. In the initial phase, it was assumed that the production capacity would reach 55,000 pieces of one type of tank per year on the line. Another goal was to raise

the prestige of the company and gain a competitive advantage. In turn, the challenge for the enterprise from the engineering side was to ensure the stability and repetitive quality of class B welding, which is the highest quality class in welding and comprehensive automation and robotization of one of two welding lines. The next challenges were the optimization of the cost of manufacturing the product and precise reporting of the process. Welding is a key process in the production of compressed air tanks, and its course is very demanding in terms of technology, as well as organizational due to the limited availability of qualified welders, which additionally have strict standards regarding qualifications and health protection. Tanks also have to meet the high quality requirements imposed by European Union regulations - they are overstated for security reasons. In addition, the recipients of these products are mainly international car concerns, which expect the supplier to adapt to their procedures and standards - not only qualitative, but also price and operational - including fast delivery time. The automated welding line is operated by 5 robots that perform the process of welding tanks and cleaning welds. The whole process of producing the tank is carried out in a mechanical way: from loading of components, to delivering them to the marking station of finished tanks. The task of line operators is to equip them with raw materials and to deliver finished products to the test zone. Welding robots at the POLMO plant allowed to obtain full control over the process and to optimize the production costs of the product. In addition, it enabled gradual improvement of product quality and production efficiency as well as increased prestige, thanks to which the plant became competitive on foreign markets (POLMO S.A. 2018).

#### 4. Conclusion

To sum up the above considerations, the new digital revolution 4.0 is an opportunity and a challenge for the economy of the European Union and its Member States. The basis for the implementation of "Industry 4.0" is investing in modern technologies that will optimize the production process and perfect management. This will lead to increased efficiency and lowering production costs. Thus, the thesis and hypotheses of the study were achieved. The author demonstrated the benefits are unquestionable for the European economy, enterprises and consumers. Enterprises, however, to achieve them must redefine their own strategic business goals. The business effects at the enterprise level may be: higher profitability, higher sales, additional revenues, more precise and much faster adaptation to market needs. Operational effects at the enterprise level can be: improvement of product quality, improvement of resource efficiency, avoiding downtimes and failures. However, this is not possible without a new definition of enterprise management strategy. On the other hand, the EU institutions and the governments of the Member States have an obligation to provide institutional and financial support to companies that participate in Industry 4.0. The research on the implementation of the Industry 4.0 in enterprises have only been launched and the near future will indicate the forthcoming trends and assessment of the actions undertaken.

#### References

- [1] Bauer, W. Haemmerle, M. Schlund, S.; et al. (2015). *Transforming to a hyper-connected society and economy - towards an "Industry 4.0"* Edited by: Ahram, T; Karwowski, W; Schmorow, D, 6th International Conference on Applied Human Factors and Ergonomics (AHFE), Las Vegas, Jul. 26-30, 2015, Book Series: Procedia Manufacturing Volume: 3, pp: 417-424
- [2] BOSCH [online]. [cit.2018-02-22]. Available at: <https://www.bosch.com/products-and-services/connected-products-and-services/industry-4-0/>.

- [3] European Commission (2012). Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions. A Stronger European Industry for Growth and Economic Recovery Industrial Policy Communication Update. [online]. [cit.2018-02-22]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52012DC0582>
- [4] European Commission (2014). Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions. For a European Industrial Renaissance (COM/2014/014 final). [online]. [cit.2018-02-22]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1438933079565&uri=CELEX:52014DC0014>.
- [5] European Commission (2015). Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions. A Digital Single Market Strategy for Europe - COM(2015) 192 final. [online]. [cit.2018-02-22]. Available at: <https://ec.europa.eu/digital-single-market/news/digital-single-market-strategy-europe-com2015-192-final>.
- [6] European Commission (2015). Digital transformation of European industry and enterprises, Strategic Policy Forum on Digital Entrepreneurship. [online]. [cit.2018-02-22]. Available at: [http://ec.europa.eu/growth/content/digital-transformation-european-industry-and-enterprises---report-strategic-policy-forum-0\\_en](http://ec.europa.eu/growth/content/digital-transformation-european-industry-and-enterprises---report-strategic-policy-forum-0_en)
- [7] European Commission (2017); Digital Single Market. European countries join forces to digitize industry. [online]. [cit.2018-02-22]. Available at: <https://ec.europa.eu/digital-single-market/en/news/european-countries-join-forces-digitise-industry>
- [8] European Parliament (2015). Industry 4.0. Digitalization for productivity and growth. [online]. [cit.2018-02-22]. Available at: [http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS\\_BRI\(2015\)568337](http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI(2015)568337).
- [9] European Parliament. (2012) Resolution of 23 October 2012 on Small and Medium Size Enterprises (SMEs): competitiveness and business opportunities (2012/2042(INI)) [online]. [cit.2018-02-22]. Available at: <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P7-TA-2012-387>
- [10] European Parliament. (2013) Resolution of 18 December 2013 on reindustrialising Europe to promote competitiveness and sustainability (2013/2006(INI)). [online]. [cit.2018-02-22]. Available at: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=/EP//TEXT+REPORT+A7-2013-0464+0+DOC+XML+V0//EN>
- [11] Kollár D. and Melková M. (2016), Positives and Negatives of the European Digital Single Market. In Kovářová, E.L. Melecký and M. Staničková (eds.). *Proceedings of the 3<sup>rd</sup> International Conference on European Integration 2016*. Ostrava: VŠB-Technical University of Ostrava, 2016, pp. 463-471. ISBN 978-80-248-3911-0.
- [12] Mesjasz-Lech, A. (2016), Directions of Changes in the Sustainable Development of Transport in Poland in the Context of European Integration In Kovářová, E.L. Melecký and M. Staničková (eds.). *Proceedings of the 3<sup>rd</sup> International Conference*



- on *European Integration 2016*. Ostrava: VŠB- Technical University of Ostrava, 2016, pp. 623-630. ISBN 978-80-248-3911-0.
- [13] Ministerstwo Rozwoju. Powstanie Polska Platforma Przemysłu 4.0. Informacja prasowa z dnia 31 maja 2017 r. [online]. [cit.2018-02-22]. Available at: [www.mpit.gov.pl/media/38857/PowstaniePolskaPlatformaPrzemyslu4\\_0.pdf](http://www.mpit.gov.pl/media/38857/PowstaniePolskaPlatformaPrzemyslu4_0.pdf)
- [14] Mynarzová, M. and Kaňa R. (2014). European Union Industrial Policy-Chances and Challenges for the Globalisation Era. In *Proceedings of 12th International Conference on Hradec Economic Days (HED 2014): Economic Development and Management of Regions*. Hradec Králové: Univerzity Hradec Králové, 2014, s. 309-315. ISBN 978-80-7435-367-3.
- [15] Mynarzová, M. and R. Kaňa (2014). Theory and Practice of Industrial Policy of the EU in the Context of Globalization Challenges. In: Honová, I. et al. (eds.). *Proceedings of the 2nd International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, Faculty of Economics, pp. 499-507.
- [16] Neugebauer R, Hippmann S, Leis M, Landherr M (2016). Industrie 4.0 – From the perspective of applied research. In *49th CIRP Conference on Manufacturing Systems (CIRP-CMS 2016)*. pp.2-7. DOI: 10.1016/j.procir.2016.11.002. [online]. [cit.2018-02-22]. Available at: <http://www.sciencedirect.com/science/article/pii/S2212827116311556N>.
- [17] Olender-Skorek M. (2017). Czwarta rewolucja przemysłowa a wybrane aspekty teorii ekonomii, *Social Inequalities and Economic Growth*, No. 51 ( 3/2017). Rzeszów, pp. 38-49
- [18] Platform Industrie 4.0. Federal Ministry for Economic Affairs and Energy. Federal Ministry of Education and Research. [online]. [cit.2018-02-22]. Available at: <http://www.plattform40.de/I40/Navigation/EN/ThePlatform/PlatformWorkingGroups/platform-working-groups.html>.
- [19] POLMO S.A. [online]. [cit.2018-02-22]. Available at: <http://www.cylex-polska.pl/reviews/viewcompanywebsite.aspx?firmaName=polmo+s.a.&companyId=10349427>
- [20] Soldaty, A. (2017). Przemysł 4.0 – wyzwania i oczekiwania dotyczące nowoczesnej edukacji. Konferencja Edeal; [online]. [cit.2018-02-22]. Available at: <http://edual.polsl.pl/pdf/Soldaty.pdf>
- [21] Toynbee A. J. (1884/ 2017) *The industrial revolution* (paperback), Independently published. ISBN-10: 1521368988; ISBN-13: 978-1521368985.
- [22] Westkämper, E. (2014). *Towards the re-industrialization of Europe: a concept for manufacturing for 2030*. Springer, 2014.

## Legal Aspects of Public Property in the Selected EU Countries

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### **Abstract**

*The paper deals with the European integration in the sphere of potential codification of the legal regulation regulating the administration and management of public property. The paper compares the current situation of legal regulation of public property of two EU member states - the Czech Republic and France. Thanks to this mutual comparison, the attention is paid to the shortcomings of Czech regulation of public property. On the basis of the existing situation, the author proposes some measures for the Czech legislator how to improve the current situation of the legal regulation of public property in the Czech Republic. The paper therefore necessarily includes the concept of French and Czech administrative law, which has been already affected in the past by the process of European integration, both in the legislative and political spheres. European integration of public property law also has primary impact on the economies of EU member states and secondarily on the EU as a whole.*

**Keywords:** codification, EU integration, France, public property

**JEL Classification:** K19, K23, K33

### **1. Introduction**

The European integration is a process that involves political, economic and legislative spheres of countries. These spheres are very often connected together. The presented paper is focused at the legislative sphere regulating administration and management of public property in two selected EU member states - the Czech Republic and France. It is necessary therefore to compare legal regulation of public property in these countries and to point out their advantages. Results and seminal differences could serve as an inspiration for the harmonization of the legal regulation of public property in the EU member states.

That is why the analytical, comparative and descriptive methods were used to write this paper. The aim of the paper is presented the French conception of legal regulation of public property and to point out its advantages. The hypothesis of the paper is defined as "the Czech legal regulation of public property is disintegrated".

Among a lot of writings dealing with French administration law, it is necessary to mention for example the writing by Prof. Jacqueline Morand-Deville (Morand-Deville, 2011). This writing comprehensively deals with the French administration law, including legal regulation of public property. The French and Czech legal regulation of public property was also used as another important source for this paper.

The public property is the opposite of the private property which constitutes the individual freedom and the right to private property (Feber, Petrucijová, 2016).

In the Czech law, there is impossible to find the full definition of public property. It is necessary to come out of the doctrine of Czech administrative law which understands public property most often as "*property belonging to public entity (state, territorial self-governing unit, other public law corporation, independent public institution, public fond...), i.e. typically the entity of public administration as a legal person of public law, respectively in general a "public subject" and its object being a public thing in a broad sense, or rather a thing intended for public purposes*" (Havlan, 2016, p. 11).

The significance of the legal definition of the public property is very important nowadays because it allows and warrants nondiscriminatory manner of access to the property by everyone (Nová, 2016).

In developed countries (for example France), there we can find a legal definition of the public property. This fact indicates a need of the protection both individual property rights and public property rights (Hon, Honová, 2016).

## 2. Legal Regulation of Public Property

In the Czech Republic the general legal regulation of State property is the Act No. 219/2000 Coll., on property of the Czech Republic and its engagement in legal relations. As can be seen from the title of the act, it explicitly governs the state property and not the property of other public entities. In any case, it is a general legal regulation governing the management of state property. However, in addition to this legislation, it is still necessary to reflect another legal acts such as the Civil Code, Public Procurement Act, etc. Regarding to the legal regulation of another public entities other than state, it is especially worth mentioning the Act on Municipalities, the Act on the Regions and the Act on the Capital City of Prague.

On the basis of the above mentioned, it is therefore possible to discuss the fragmentation of the Czech legislation, i.e. its incoherence and consequently the lack of clarity, and consequently, its heavier applicability.

If we focus on France, we could see the situation exactly opposite. France is the exemplary country typical of its codification across the legal regulation of the country. Concerning e.g. financial law, more precisely tax law, it can be stated that in France, there we can find both the substantive and the procedural tax law as codified. The French legislators' interest in codification can also be demonstrated through, for example, the Civil Aviation Code, the Sport Code, the Tourism Code and number of another codes.

Regarding to the French legal regulation of public property, it is absolutely necessary to mention the cardinal role of General Code on Public Property (i.e. in French *Code général de la propriété des personnes publiques*, hereinafter referred to as "GCPP"). It is a comprehensive code which contains legal regulation of property belonging to public entities under French law, which became effective in 2006.

In connection with the French legal regulation of public property, it is also necessary to mention another crucial codes - the General Code on Territorial Self-Governing Units (GCTSGU). This code is a *lex specialis* to the GCPP and it governs, besides other things, the treatment of public property of public entities (i.e. departments, overseas departments, regions, municipalities, associations of municipalities). The society is often forgetting the magnitude of the property of territorial self-governing units. But in fact, the property owned by self-governing units represents an important socioeconomic factor with the potential to affect a wide range of aspects of life, considering the scope of self-governing units (Havlan, P., Janeček, J., 2016).

The French legislation regulating the area of public property was rather complicated and fragmented until adoption of the GCPP. Although the State Property Code was adopted in 1957, the area of public property belonging to the territorial self-governing units and public institutions was still not fully covered. The legal regulation of the administration of public property of these public entities was rather fragmentary, or even empirical. It was therefore important to restore the unity of legal regulation of public property, with regard to an observance of the constitutional principle of access to law and the comprehensibility of legal norms. Since then, the primary objective has been to seek codification of rules regulating the public property and private property of French public entities.

GCPP effective from April 2006 includes all legal regulation regulating the administration and management of public property of public entities.

We can summarize that the biggest difference between the Czech and French legal regulation of public property consists in the codification (in France) and the fragmentation (in the Czech Republic) of the legislation concerning public property. It can be also concluded that the French form of legal regulation of public property looks and works more coherent than the Czech form of legal regulation. This fact, besides other things, results in better comprehensibility and also in better level of advancement of the French administrative law. According to the general opinion, the French codification of legal regulation of public property could be inspiring for both the Czech concept of legal regulation of public property and for the legal regulations of other EU member states.

### **3. Public Property in French Law**

In view of the fact that the French legal regulation was found as coherent, well arranged and inspiring, it is appropriate to occupy with the French legislation of public property.

The French legal regulation of public property (unlike the Czech legislative) includes a legal definition of public property. Under Article L. 2111-1 of GCPP, the property of public entities is, with the exception of special statutory provisions, the movable or immovable property belonging to such public entities and as well:

- is intended for direct use by the public;
- or is intended for a public service. In such a case, the public property has to be the subject of "the necessary planning for the performance of the public service tasks".

On the basis of the above-mentioned legal definition of public property in France, it can be concluded that it fulfils the main features listed in Chapter 1 *in fine* of this paper.

The foundation of conception of public property in France is a public interest, which is often transformed into a public utility in France, for example in the form of the phrase of "intended for direct use by the public" or "designated for public service". In France, the public property of public entities differs from private property of public entities by subjecting them to a highly protected legal regime which is based on the following aspects - the inalienability and the imprescriptibility.

However, in order for property to be included in this category, it must fulfil two principal criteria - the criterion of subject and the criterion of assignment. Regarding to the criterion of subject, a subject has to be a legal person of public law. Regarding to the criterion of assignment, i.e. within the meaning of the Article L. 2111-1 of GCPP.

### **3.1 Example of Public Property in France**

In the following subchapter I will focus on individual example (Hertz waves) of public property in France, which is completely different from the Czech concept of Hertz waves.

It should be noted at the outset that the status of property belonging to a public property group can also result from the act. In France, this is the case of Hertz waves.

While in the Czech Republic the frequency band, although considered by material possessions, is not eligible to be object of the proprietary right, in France the frequency band, respectively hertz waves belong to the state public property under the article L. 2111-17 of GCPP. Furthermore, the article L. 2124-26 of GCPP provides that "*the use of radio frequencies on the territory of the Republic constitutes a private use of the state's public property*".

It could be concluded that the French conception of legal regulation of Hertz waves reflects more precisely the reality and a social need of the legal regulation than the Czech legislation which is insufficient. This is another example why the French legislation should be the model of inspiration for EU member states.

### **3.2 Protection of Public Property in France**

The protection of public property or, more precisely, the legal regime for the protection of the public property of public entities in France is characterized by the following attributes:

- inalienability;
- non liable to confiscation;
- imprescriptibility.

The protection the public property of the French public entities also reflects the fact, that before such property can be transferred to a person of private law, it is necessary to exclude it from the public property as *a priori*. This operation involves the preliminary exemption of the property from the assignment for public use and the formal decision of the particular public entity.

However, a private person can use property in the public ownership in certain cases without the transfer of ownership. These are cases of so-called temporary use. The mentioned use is possible for a fee, it has to be approved in writing by the relevant public entity and it is always revocable. At the same time, such temporary use of public property by private entity has to be compulsory compatible with the original purpose of the property.

As regards the exclusion of property belonging to the public property of public entities, this process is governed by the second part of the GCPP, starting with Article L. 2141-1, which states that "*The property of public entity referred to in Article L. 1, which is no longer assigned to public service or direct use by the public is no longer part of the public property, from the time when the administrative act declaring its exclusion was put out.*"

The exclusion of property from the public property category of public entities can be characterized in the French law as a two-phase process. In the first phase (*la désaffectation*) it is necessary to separate the property from either direct use by the public or to separate the property from the assignment to the public service. After the successful completion of the first phase, it is possible to proceed to the second phase, i.e. the exclusion (*la déclassement*) of property from the category of the public property belonging to a public entity. While the first phase (i.e. the separation of property) could be characterized as a factual situation (i.e. factual

separation either from the direct use of the public or from the public service assignment), the second phase (i.e. exclusion of the property) involves the decision of the relevant public entity via a decree or an order (i.e. always an individual legal act) as a result of an administrative procedure which in some cases involves a public inquiry or the need to obtain the consent of a third public entity (the consent of a third entity is necessary, for example, when cultural buildings are removed from public property; in this case, a consent is required either by the Ministry of Culture or by the French State Monument Authority). The discharged public property becomes the private property of public entity. The public entity can give the property a new assignment, keep it as a land reserve, manage it as a private property or decide to transfer it under civil law conditions, while reflecting public law standards (primarily aimed at protecting the interest of the state and its public policies - for example the culture).

If there is a situation when the property of a public entity is straight excluded from the public property without its factual separation from the direct use of the public or the separation from the public service assignment, such property remains classified as public property. It follows from the above that both of the phases of the two-phase process of exempting property from public property of public entities are obligatory.

It can be summarized that the French legal protection of the public property is at a very high level which allows to protect a public interest. In my point of view the two-phase process is a comparatively uncomplicated, practical and well realizable. This process could be another inspiration for EU member countries how to unify and improve their legal regulation of the public property.

#### 4. Conclusion

The presented paper was aimed at the legal regulation, respectively the legal regime of public property in France and in the Czech Republic as two EU member states within the mutual comparison. From this comparison, it can undoubtedly be assumed that the Czech legal regulation is quite fragmented and therefore somewhat confusing. On the other hand the French legal regulation of public property is based on the comprehensive code that successfully solves the Czech problem of the fragmentation of legislation as well as its opacity. Apart from the General Code on Public Property, also the General Code on Territorial Self-Governing Units (governing the management of the public property belonging to relevant public entities) was mentioned.

In the paper there was presented legal definition of public property in France which is absenting completely in the Czech legal order. There were also mentioned crucial aspects on which the public property in France is built. As an interesting example of public property in France it has been mentioned the case of frequency waves which, unlike in the Czech Republic, are the object of public property.

Then the attention was paid to the legal regime of the protection of the public property in France which could be characterized as relatively strict. This fact substantiated by basic attributes on which the legal regime of the protection of the public property in France is built and then by the stating of an obligatory two-phase process which leads to a successful exclusion of the property from the public property category of public entities in France.

The hypothesis of the paper defined in the introduction as the "*the Czech legal regulation of public property is disintegrated*" was confirmed. It could be concluded that the French conception of codification of legal regulation of public property is considerably inspiring for

another EU member states and could be useful for a harmonization of the legislation in these countries.

### **References**

- [1] Act No. 128/2000 Coll., on Municipalities
- [2] Act No. 129/2000 Coll., on Regions
- [3] Act No. 131/2000 Coll., on the Capital City of Prague
- [4] Act No. 219/2000 Coll., on property of the Czech republic and its engagement in legal relations
- [5] Act No. 89/2012 Coll., Civil code
- [6] Act No. 134/2016 Coll., on Public Procurement Act
- [7] General Code on Public Property
- [8] General Code on Territorial Self-Governing Units
- [9] Feber, J., Petrucijová, J. (2016). Economic Activity and Economic Ethics in the Context of Globalization. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 211-220.
- [10] Havlan, P. (2016). *Veřejný majetek*. Brno: Masarykova univerzita.
- [11] Havlan, P., Janeček, J. (2016). Territorial self-governing units of the Czech Republic as entities possessing ownership and other proprietary rights (the basic conceptual issues). *Danube*, vol. 7, pp. 105-121.
- [12] Hon, M. Honová, I. (2016). EU Electricity Market in Context of EU Competitiveness. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 350-358.
- [13] Morand-Deville, J. (2011). *Droit administratif*. Paris: Montchrestien.
- [14] Nová, M. (2016). Migration – Models and Principles of Immigrant Integration. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 674-678.

## Analysis of Expenditures of Pensioners Households in the Czech Republic and EU

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### Abstract

*The population is aging. This indisputable fact is recognized and challenged by all developed countries in the world. In this paper, we demonstrate in the European context, based on data from the Eurostat and Czech Statistical Office, the situation of pensioner's consumption in the Czech Republic and EU. The analysis is concerned with expenditures of pensioners' households on their consumption. The transition from the economically active phase of life into the pensioner's state is often characterized by the decrease of the individual or household income. The financial instruments in the Czech Republic that would secure the individuals in retirement are still underdeveloped. It is undoubtedly the case for low-income individuals and households with income below average. Thus, the pensioners have to decrease their consumption. This phenomenon can be exaggerated by the growth of inequality of lower and high-income households.*

**Keywords:** Czech Republic, European Union, household's expenditures, inequality, pensioners

**JEL Classification:** D14, D31, D63

### 1. Introduction

For pensioners, the transition from the economically active phase of life to economically inactive (retirement) is a time of significant change. Often dramatically changes the content of the day, the motivation of activities, but also in most cases the household/individual income drops. If a pensioner household does not prepare for this situation in advance, it gets into a difficult life situation (Hrast et al., 2012; Sýkorová et al., 2014). Retirement is a time of life that has grown ever longer in the developed world, and the number of pensioners has increased accordingly. It puts the strength of social security systems and the social safety net in general into question. Therefore, there is a need for proper financial planning for retirement (Topa, Lunceford and Boyatzis, 2018). Most pensioner households are at risk of becoming entirely dependent on the country's social system. This problem arises from the fact that public old-age schemes were created under entirely different demographic and economic conditions (as the White Paper of the European Commission, 2012) points out. Pavolini and Seeleib-Kaiser (2018) have assessed what extent reforms of occupational pensions (OP) have fostered a risk shift or increased social protection dualism across countries in the EU. Thus, the changes should be prepared carefully, since it is evident that countries relying on voluntarism about



OPs coverage tend to witness processes of dualization. However, the general income inequality does not affect pensioners' subjective economic well-being (Palomaki, 2017). However, this paper does not have the ambition to address the issue of the income side of pensioner households, where the primary income of pensioner households is usually a retirement pension. It will focus on the limited manoeuvring space of pensioner households on the expenditure side. The underlying database is data from Eurostat and supplemented by data of the Czech Statistical Office, which will refine the situation of pensioners for the Czech Republic.

## **2. Analysis of Expenditures of Pensioners Households**

In this chapter, we analyse the expenditures structure of typical pensioner's households in the EU and the Czech Republic. It will lead to the investigation of the main issues that should be considered by the policymakers in the future. Household expenditures are one of the essential elements that are used for analysis of the efficiency of the social benefits systems (Beran, 2013; Beran and Franek, 2016).

### ***2.1 Demographic Development***

Over 10.5 million inhabitants lived in the Czech Republic in 2015 and of those, the people over 65, made up over 17.8%. In the absolute terms, it is a population of 1.9 million (Eurostat, 2017a). The Czech Statistical Office (2013) lists three alternative trends in the number of pensioners. According to the typical scenario in 2020, over 20,5% of the total population in the Czech Republic should be over 60+. In 2050, their number should increase to almost one-third of the population (about 32.2%) of the Czech Republic.

The trend mentioned above of population aging is not the reality of the Czech Republic alone. Over the past ten years, EU Member States have seen an increase in the old-age dependency ratio (% of the population aged 65 and over relative to the people aged 15–64 years) on average by more than 4 pp. It means from 25% in 2005 to 29% in 2015 (Eurostat, 2017a). In the Czech Republic, there is an increase of this indicator by 6.7 pp (the difference between 2005 and 2015), and thus, it is one of the three EU countries with the highest upsurge. The other two are Malta with an increase of 8.3 pp and Finland with an increase of 7.4 pp. However, it is also important to note that the old-age dependency ratio in the Czech Republic was 26.6% in 2015 and is therefore now below the EU average. According to Eurostat's forecasts (2017b), the Czech Republic will be in the 15th position in 2020 and even in the 11th position in 2050. We see a similar increase in other V4 countries, such as Poland moving 16th in 9th place in 2050, Slovakia shifting 14th place to 13th place. Public pension expenditure as a percentage of GDP has risen in the EU-15 from about 6% in 1960 to over 12% in 2000. Thus on the assumption that no action will be taken to address this situation, pension spending could reach unsustainable levels close to 20% of GDP in the coming decades (Gal, 2008). This situation creates further pressure on the welfare state and challenges the budgets of EU countries, some more than others (Baba, 2016).

An increasing number of pensioners is a challenge for economic policymakers. The old-age pension was designed to ensure a decent living standard in old age. As demographics change, it seems that this role cannot be fulfilled in the future.

## 2.2 Pensioner Citizens' Expenditure in the European Union

The first data group used in the article is Eurostat data. Two COICOP (Classification of individual consumption by purpose) consumer segments (in total it includes 12 parts) were selected in two tables for pensioner households across the European Union (28 countries). Two of these sections were chosen for their necessity: food, non-alcoholic beverages and housing, water, electricity, gas and other fuels. An also section including health. The other two sections represent the capability of the pensioner to interact with his or her surroundings, whether physically or using modern means of communication represented by transport and communications. The last section under review tells us about the capabilities or possibilities to spend money for leisure activities: recreation and culture. Here, it should be noted that this does not have to include the retirement pension for the given month only. The pensioner can use its savings too. Another option is to reduce spending in other sections, except for food and housing. As can be seen from Table 1, living standards in individual member states are crucial to the structure of money issuance. For economically weaker countries, it is typical that pensioner households spend more on the section "Food and non-alcoholic beverages." The theoretical limit could be 20% of the total budget. There are exceptions where pensioner households spend less in economically weaker countries, but they are not significantly lower.

**Table 1: Structure of Expenditures of a Pensioner Household for Necessities in the European Union in 2010**

	Food and non-alcoholic beverages		Housing, water, electricity, gas and other fuels		Health	
	%	rank	%	rank	%	Rank
<b>Belgium</b>	14.1	21	28.9	23	6.2	11
<b>Bulgaria</b>	30.3	2	41.0	3	6.7	8
<b>Czech Republic</b>	22.3	10	27.4	24	4.2	18
<b>Denmark</b>	11.3	26	37.4	10	3.9	20
<b>Germany</b>	11.4	25	33.2	17	6.2	11
<b>Estonia</b>	28.7	5	35.8	15	5.5	13
<b>Ireland</b>	13.2	22	33.4	16	3.4	22
<b>Greece</b>	18.1	14	30.8	21	7.1	7
<b>Spain</b>	16.5	17	36.3	12	4.1	19
<b>France</b>	18.8	13	30.2	22	1.8	27
<b>Croatia</b>	27.2	7	37.0	11	3.5	21
<b>Italy</b>	20.5	11	37.7	8	4.8	16
<b>Cyprus</b>	17.5	15	30.9	20	7.7	5
<b>Latvia</b>	30.0	4	27.4	24	9.7	1
<b>Lithuania</b>	30.3	2	37.5	9	8.0	4
<b>Luxembourg</b>	9.1	28	39.4	6	2.8	25
<b>Hungary</b>	19.1	12	44.4	1	6.7	8
<b>Malta</b>	27.7	6	8.7	28	9.1	3
<b>Netherlands</b>	10.2	27	33.1	18	1.8	27
<b>Austria</b>	13.0	23	26.7	26	5.0	15
<b>Poland</b>	24.2	8	39.9	5	7.2	6
<b>Portugal</b>	15.3	18	36.1	13	9.4	2
<b>Romania</b>	32.2	1	41.0	3	6.3	10
<b>Slovenia</b>	17.5	15	36.0	14	2.9	24
<b>Slovakia</b>	24.2	8	42.4	2	4.6	17
<b>Finland</b>	14.2	20	32.8	19	5.2	14
<b>Sweden</b>	13.0	23	38.6	7	3.1	23
<b>United Kingdom</b>	14.9	19	19.0	27	2.0	26

Source: Authors based on data from Eurostat (2017c)

The average cash expenditure of pensioner households for Food and non-alcoholic beverages in the member countries that joined the EU after 2004 is 25.5%. Pensioner households in the Czech Republic in this comparison reach value of 22.3% (ranked 10th), which is relatively close to the average. The average amount for pensioner households in the original member states is 14.2%. It is, therefore, lower by more than 10 pp. In other words, the richer the country, the fewer pensioners spend their budget on the necessary survival items. The fact is that in the original member states there is a higher price level, which is also reflected in the conversion in the parity of the purchasing standard. An explanation of this phenomenon can, therefore, be found in the higher budget of pensioner households in the original member states. It is due to a higher income during the working age and consequently relatively lower spending of pensioner households in the comparison of this section across the member states of the European Union.

**Table 2: Structure of Expenditures of a Pensioner Household for Services in the European Union in 2010**

	Transport		Communications		Recreation and culture	
	%	rank	%	rank	%	Rank
<b>Belgium</b>	10.6	9	2.3	22	8.3	9
<b>Bulgaria</b>	4.0	26	3.4	10	2.3	28
<b>Czech Republic</b>	8.4	16	4.2	2	10.3	6
<b>Denmark</b>	9.3	14	2.0	25	11.6	4
<b>Germany</b>	11.0	7	2.2	24	11.4	5
<b>Estonia</b>	5.4	23	4.2	2	6.6	15
<b>Ireland</b>	10.4	10	3.3	11	8.1	11
<b>Greece</b>	8.4	16	3.2	12	3.1	25
<b>Spain</b>	8.4	16	2.6	17	5.4	18
<b>France</b>	11.7	4	2.4	19	7.1	14
<b>Croatia</b>	7.0	21	3.7	7	3.8	24
<b>Italy</b>	8.3	19	2.0	25	4.9	21
<b>Cyprus</b>	10.4	10	2.9	14	4.3	22
<b>Latvia</b>	7.7	20	4.3	1	6.0	16
<b>Lithuania</b>	4.4	25	2.6	17	2.9	26
<b>Luxembourg</b>	11.2	5	1.7	27	7.3	13
<b>Hungary</b>	5.9	22	4.2	2	5.4	18
<b>Malta</b>	11.2	5	4.0	5	8.1	11
<b>Netherlands</b>	10.8	8	2.4	19	10.0	8
<b>Austria</b>	12.0	3	1.4	28	12.1	3
<b>Poland</b>	5.0	24	3.7	7	5.2	20
<b>Portugal</b>	9.4	13	3.0	13	4.0	23
<b>Romania</b>	2.5	28	2.8	16	2.5	27
<b>Slovenia</b>	9.2	15	3.7	7	8.2	10
<b>Slovakia</b>	3.6	27	3.8	6	6.0	16
<b>Finland</b>	14.4	1	2.4	19	10.1	7
<b>Sweden</b>	10.3	12	2.3	22	13.8	2
<b>United Kingdom</b>	13.4	2	19.0	27	14.9	1

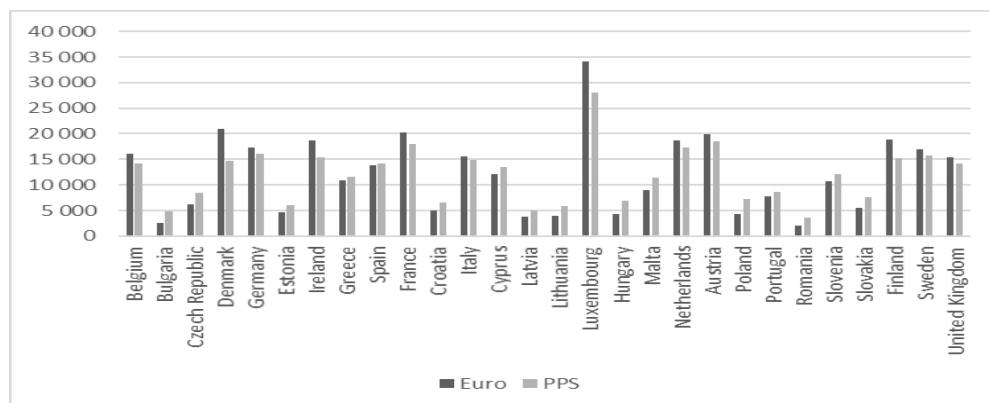
Source: Authors based on data from Eurostat (2017c)

Housing costs are an essential item in all EU member states. The average age of the pensioner households for this section in the original member states is 32.9% and 34.6% of the newcomers. Housing, water, energy, and fuel is the most significant spending for pensioner households throughout the European Union. Pensioner households in the Czech Republic in this comparison ranked up to 24th place with a value of 27.4%. Within the same methodology, pensioner households in the Czech Republic show a relatively low cost of spending on the

most expensive item. In the case of health expenditure, there is no difference between the European Union and the countries, which joined after 2004. The average for pensioner's households in the European Union in this section is 5.3%. The Table 2 captures the remaining three sections. For transport, we can suggest that the more advanced the country and the higher are expenditures of pensioner households. In the Czech Republic, we are struggling with the problem that when a pensioner's household loses one member, it abandons its means of transport (i.e., a vehicle). A pensioner household would renounce the car even if they became too old. At the same time, it should be noted that in the Czech Republic, the costs associated with transportation for elderly are subsidized from the public budget. For example, a reduced fare or it is free of charge. Nevertheless, living without a vehicle reduces the elderly's living space and thus increases the risk of social exclusion.

The opposite applies to communications. The more advanced the country (the original countries of the European Union), the lower is the spending on communications. The imaginary threshold (except for some exceptions) is 2.5%. The Czech Republic ranked second with 4.2%. It can also be influenced by the higher rate of communication services in comparison with the original EU member states. Again, restrictions on spending in this area would again increase the risk of social exclusion, as they would lose the ability to communicate with their family and their surroundings. The last section is "recreation and culture". Pensioner households in the original member states spend more than 10% of the total budget in this section. The cost of free time activities varies considerably. Again, however, it is higher than in the newly admitted countries. Except the Mediterranean countries (Greece, Portugal, Italy and Spain), where pensioner households issue so little money to this section that they are more like the new member states. Based on the result of the Eurostat survey, it can be argued that, in the EU comparison, pensioner households in the Czech Republic are similar to their counterparts in original member states. They spend 10.3% and ranked 6th. It is still necessary to point out that the absolute amount of money issued by pensioner households in the original member states is different. Pensioners in the Czech Republic would like to enjoy the same conditions of the original EU member states. However, the structure of expenditures is different. Pensioners' spending in the Czech Republic merely resembles the situation in countries that joined after 2004. If they achieve similar values in some items, it is at the expense of the reduction of other COICOPs. However, the expenditures are in relative measures, and without knowing the exact amount, it is not clear how much money the pensioners have at their disposal. Following Figure 1 shows median equalized net income in Euro and purchasing power standard. It shows the unevenness of pensioner's income in the EU.

**Figure 1: Median Equalized Net Income of EU pensioners**

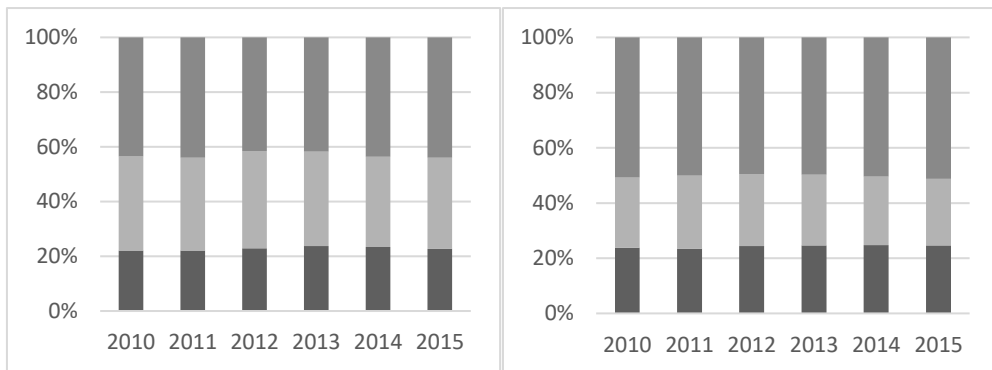


Source: Authors based on data from Eurostat (2017c)

### 2.3 Family Account Statistics of the Czech Statistical Office

The Czech Statistical Office provided further data through its “Household Budget Survey.” This investigation tracks the administration of private households and includes information on the amount of their spending and consumption patterns. The survey corresponds to the structure of households in the Czech Republic (contains a set of 3,000 households). The spending is calculated per head, even for a two-member household. The following charts in Figure 2 illustrate the distribution of pensioner household spending in 2010-2015. “Food and Non-Alcoholic Beverages and Housing, Water, Energy, Fuels are used individually. The remaining ten sections are aggregated. The first chart is for an average single-member pensioner household and the second for an average two-member pensioner household.

**Figure 2: Net Cash Expenditures Cumulated into Three Categories of Average Single-Member Pensioner Household (right) and Two-Member Pensioner Household (left) in 2010-2015 in the Czech Republic**



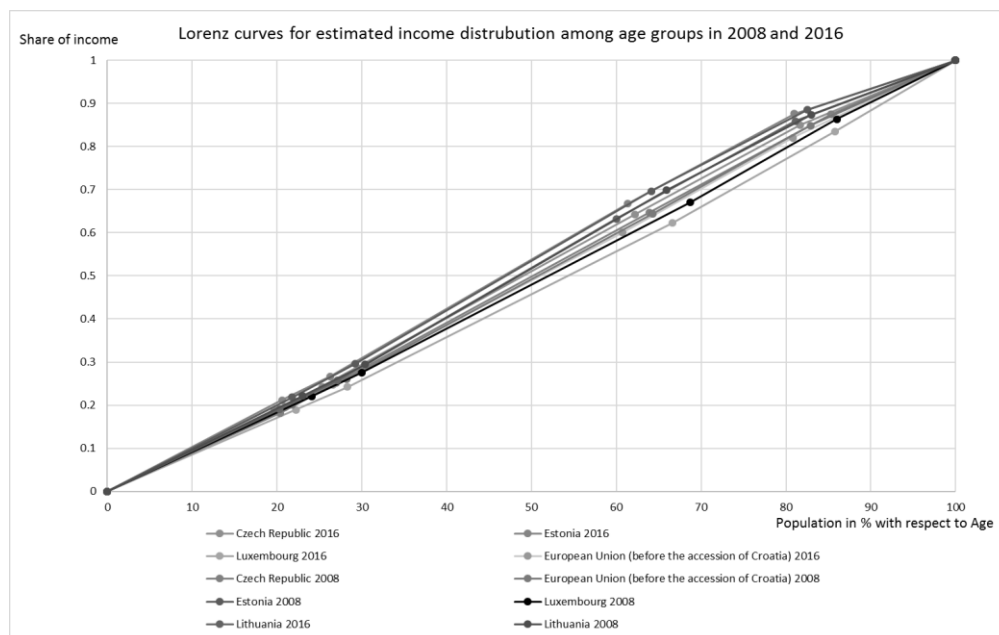
Source: Czech Statistical Office (2017a, 2017b, 2017c, 2017d, 2017e, 2017f), own elaboration

As can be seen from the chart, food (red column) represents over 22% of all spending (maximum 23.7%). Accommodation (yellow column) always exceeds 33% (maximum 35.5%). For the remaining ten sections (grey column), it is only under 45%. The largest share of the remaining ten divisions belongs to “Recreation and culture” (average in the monitored period is 8.6%) and “Other goods and services” (average in the monitored period 8.2%). In three of the six years surveyed, the Housing equipment and repairs are over 5%. The remaining seven sections of those twelve are below 5%. The two-member pensioner household, the situation is slightly different. It is because, in the case of a two-member household, the cost of living is higher, but economies of scale come into play. The spending on the food of a two-member pensioner household is almost identical. About 5 pp of savings were made from the amount spent on housing. For the remaining sections, it is about 5 pp. more than in single-member pensioner households. Over the entire monitored interval, four sections reached above the 5% limit: Other Goods and Services; Recreation and Culture; Transportation and Home Furnishings; Household Equipment and repairs. Transport expenditure for a two-member pensioner household has such a significant share because it owns a passenger car. The lowest expense share for pensioner households, according to the Czech Statistical Office and Eurostat, is Education. Here we can say that this is almost a zero item.

### 3. Discussion

There is no apparent problem in analysing expenditures of pensioner households. Only that the most prominent expenditure (over 50%) is for necessary goods. This deviation, however, has broader consequences, which are reflected in its cash balance. The single-member pensioner household in the monitored period has a negative overall cash balance. It means that a pensioner is not able to cover his expenses with his income. A two-member pensioner household acquires a bit better earnings. In all monitored years, it has ended with a surplus. For this surplus, it is necessary to add that it was sufficient to cover extraordinary expenses for only five of the six years surveyed. Extraordinary expenses in 2015 amounted to CZK 9,900. It is an expense to cover household-related unexpected expenditures, for example, when a washing machine, a refrigerator, etc. is broken. If we take another view of this problem using income distribution, we can see that in countries like Estonia or Lithuania, where the relative expenditures for necessities are among the highest in EU, also have income distribution skewed towards people under 65. It also corresponds to the income distribution among different age groups as shown in Figure 3.

**Figure 3: Lorenz Curve for Income Distribution Among Different Age Groups in 2008 and 2016**



Source: elaborated based on population structure and Mean and median income by age and sex - EU-SILC survey (Eurostat, 2018a; Eurostat, 2018b)

We can see that in countries like Lithuania and Estonia there is the higher difference in income distribution between age groups under 65 and over 65 (the Lorenz curve is concave). Furthermore, this situation has not changed since 2008. Interestingly, in Luxembourg, the situation is different (the curve is convex). We can see that the income distribution has shifted between 2008 and 2016 in favour of the elderly. The Czech Republic remains quite close to the European average. However, it finds itself on the side where the most post-communist countries lay. It also helps to explain the difference among the expenditures of the elderly in

EU member states. Failing to cover extraordinary expenses is in itself severe, especially from the social point of view. It decreases the maintaining the standard of living. However, failing to manage the positive balance at least in the short run is unsustainable and poses a big problem. Thus, the death of a partner in the Czech Republic represents almost automatically a fall into poverty. This fact supports two phenomena. There is the increase of pensioner households that face bankruptcy. Unfortunately, the time series is too short to get the idea of the depth of the problem, and there is no data available to provide additional information on why this phenomenon occurs. Secondly, the number of pensioners who are entitled to social benefits and tangible emergency benefits is growing. An advantage of the state budget is that pensioners who have the full right under the law for these benefits do not yet apply to them.

#### 4. Conclusion

Demographic developments in the Czech Republic predict a significant increase in the pensioners' population. These people will try to sustain their living standards from the productive stage of life. Nevertheless, it is going to be harder. Today, even shortly, pensioners will not be more secure in old age. On the one hand, some people do not have income in the productive phase of life, nor any financial instruments that could provide them with sufficient funds for later life. Therefore, the composition of the expenditure of Czech pensioners differs from the consumption of pensioners in developed countries of the European Union. It is also apparent from the difference in income distribution. The Czech pensioners failed to converge towards their counterparts from developed countries in the monitored period. The opportunities of pensioners are severely limited to pensioners from developed countries. It does not mean, however, that the Czech pensioner is unhappier or less active than a pensioner from a more developed country is. The pensioner from the more developed countries is not forced to turn five crowns before spending it or buying in discounts. Household expenditure in the Czech Republic is affected by the spending on two main sections: Food and non-alcoholic beverages and Housing, water, energy, and fuels. Expenditure on food and non-alcoholic beverages in both types of pensioner households was similar. The housing, water, energy and fuel share of the total expenditure in the two-member pensioner household was lower than that of the single-member pensioner household. For two-member pensioner households, the economies of scale influence each COICOP section.

The most important finding is the inability of Czech pensioner households to manage the positive balance for a single-member pensioner household and to cover extraordinary expenses for a two-member pensioner household. It poses a future problem when we predict the development of the demographic composition of the population in the Czech Republic in the future. There is a challenging question where these households will get the money to be able to sustain and not reduce their standard of living.

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#### *References*

- [1] Baba, W. (2016). Changes in Level of Socio-Economic Development of EU Member Countries in the 2004-2013 Period - Taxonomic Analysis. In *Proceedings of the 3rd International Conference on European Integration 2016 (ICEI 2016)*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 37–45.

- [2] Beran, V. (2013). Parenthood of Low-Income Households as a Mean of Additional Income Based on the Tax and Social System Interaction in the Czech Republic. In *Proceedings of the 3rd International Scientific Conference Taxes in the World*. Ostrava: VSB-Technical University of Ostrava, pp. 23–35.
- [3] Beran, V. and Franek, J. (2016). A Comparison of the Social Benefits Systems in the Czech Republic on Model Households During Right-Wing (2011) and Left-Wing (2015) Governments Rule. In *Proceedings of 14th International Scientific Conference: Economic Policy in the European Union Member Countries, Pts 1 And 2*. Karviná: Silesian University Opava, School Business Administration Karvina, pp. 54–63.
- [4] Czech Statistical Office (2013). *Projekce obyvatelstva České republiky do roku 2100* [Projection of the population of the Czech Republic until 2100]. [online]. [cit.2017-10-12]. Available at: <https://www.czso.cz/csu/czso/projekce-obyvatelstva-ceske-republiky-do-roku-2100-n-fu4s64b8h4>
- [5] Czech Statistical Office (2017a). *The Household Budget Statistics, 2011*. [online]. [cit.2017-10-12]. Available at: <https://www.czso.cz/csu/czso/yearbooks>
- [6] Czech Statistical Office (2017b). *The Household Budget Statistics, 2012*. [online]. [cit.2017-10-12]. Available at: <https://www.czso.cz/csu/czso/yearbooks>
- [7] Czech Statistical Office (2017c). *The Household Budget Statistics, 2013*. [online]. [cit.2017-10-12]. Available at: <https://www.czso.cz/csu/czso/yearbooks>
- [8] Czech Statistical Office (2017d). *The Household Budget Statistics, 2014*. [online]. [cit.2017-10-12]. Available at: <https://www.czso.cz/csu/czso/yearbooks>
- [9] Czech Statistical Office (2017e). *The Household Budget Statistics, 2015*. [online]. [cit.2017-10-12]. Available at: <https://www.czso.cz/csu/czso/yearbooks>
- [10] Czech Statistical Office (2017f). *The Household Budget Statistics, 2016*. [online]. [cit.2017-10-12]. Available at: <https://www.czso.cz/csu/czso/yearbooks>
- [11] European Commission (2012). *An Agenda for Adequate, Safe and Sustainable Pensions. White paper*. [online]. [cit.2017-10-12]. Available at: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A7-2013-0137+0+DOC+XML+V0//EN>
- [12] Eurostat (2017a). *Population: structure indicators (data)*. [online]. [cit.2017-10-12]. Available at: [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo\\_pjanind&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjanind&lang=en)
- [13] Eurostat (2017b). *Population projections (data)*. [online]. [cit.2017-10-12]. Available at: <http://ec.europa.eu/eurostat/web/population-demography-migration-projections/population-projections-/main-tables>
- [14] Eurostat (2017c). *Consumption expenditure of private households (data)*. [online]. [cit.2017-10-12]. Available at: <http://ec.europa.eu/eurostat/web/household-budget-surveys/database>
- [15] Eurostat (2018a) *Mean and median income by age and sex - EU-SILC survey*. [online]. [cit.2018-12-02]. Available at: [http://ec.europa.eu/eurostat/en/web/products-datasets/-/ILC\\_DI03](http://ec.europa.eu/eurostat/en/web/products-datasets/-/ILC_DI03)



- [16] Eurostat (2018b). *Population: Structure indicators*. [online]. [cit.2017-12-02]. Available at: [http://ec.europa.eu/eurostat/web/products-datasets/-/demo\\_pjanind](http://ec.europa.eu/eurostat/web/products-datasets/-/demo_pjanind)
- [17] Gal, Z. (2008). Immigration in the United States and the European Union. Helping to solve the economic consequences of ageing? *Sociologia*, vol. 40, iss. 1, pp. 35-61.
- [18] Hrast, F.M., Hlebec, V. and Kavčič. M. (2012). The Social Exclusion of the Elderly: A Mixed Methods Study in Slovenia. *Czech Sociological Review*, vol. 48, iss. 6, pp. 1051–1075.
- [19] Palomäki, L-M. (2017). Reference Groups and Pensioners' Subjective Economic Well-Being in Europe. *Social Indicators Research*, vol. 131, iss. 2, pp. 509-525.
- [20] Pavolini, E. and Seeleib-Kaiser, M. (2018). Comparing occupational welfare in Europe: The case of occupational pensions. *Social Policy Administration*. Vol 52, iss. 2, pp. 477–490.
- [21] Sýkorová, D., Nytra, G. and Tichá, I. (2014). *Bydlení v kontextu chudoby a stáří* [Housing in a context of poverty and old age]. Ostrava: Ostravská univerzita v Ostravě. [online]. [cit.2017-12-12]. Available at: <http://projekty.osu.cz/vedtym/dok/publikace/pensioneri.pdf>
- [22] Topa, G., Lunceford, G., and Boyatzis, R. E. (2017). Financial Planning for Retirement: A Psychosocial Perspective. *Frontiers in Psychology*, vol. 8, iss. 2338, pp. 1-8.

## European Customer Satisfaction Index Model: Comparison of Evidences from Poland and Lithuania

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### Abstract

*The purpose of this paper is to compare usage results of the European Customer Satisfaction Index (ECSI) model for modelling customer satisfaction within supermarkets in Poland and Lithuania. Both countries became members of European Union and the common market relatively recently. This fact probably had an impact on changing consumer behaviour. Similarities and differences between these markets can be tested with ECSI model. This model was validated across a number of European countries and many industries. Its use can be interesting for newly joining European Union countries whose markets and consumer behaviours differ from the countries of the “old Union”. Lithuanian research was performed by Pilelienė and Grigaliūnaitė (2013). We adopted scales and variables used by them and ran parallel research in southern Poland. The research results showed considerable similarities. Both studies were not able to confirm the significant impact of customer expectations on perceived quality and perceived value. There was also no relationship between potential complaints and customer loyalty. In our study, we showed a greater impact of perceived quality on satisfaction and a smaller impact of perceived value. In the Lithuanian results, the perceived value had a greater impact on customer satisfaction.*

**Keywords:** *European customers' behaviour, European Customer Satisfaction Index (ECSI) model, European Union markets, structural equation modelling (SEM), supermarkets*

**JEL Classification:** *M30, L81, C30*

### 1. Introduction

Nowadays consumers have become more critical in their choices and show increased interest in many diverse attributes of products (Velčovská, Klapilová Krbová, 2016). Fulfilling their requirements and satisfaction is one of the most important issues of every company on the market. The competitiveness of a company on the market is connected with consumer satisfaction. Satisfied consumer repurchases, create positive word of mouth opinions about the company and its products, with which customers are emotionally involved with. Among a number of currently available approaches to studying customer satisfaction, satisfaction models are very useful.

In literature there are a lot of examples of customer satisfaction models. Some of them have become a classical concept i.e. ACSI (American Customer Satisfaction Index model) and ECSI (European Customer Satisfaction Index model) and they are often used by scholars all over the world.

These models are also often modified and supplemented. As an example of these models we can give TCSI – Taiwan Customer Satisfaction Index proposed by Chiu et al. (2011), H-CSI –

Hotel Customer Satisfaction Index (Deng et al. 2013) or the Swiss Index of Customer Satisfaction (SWICS) (Bruhn and Grund, 2000).

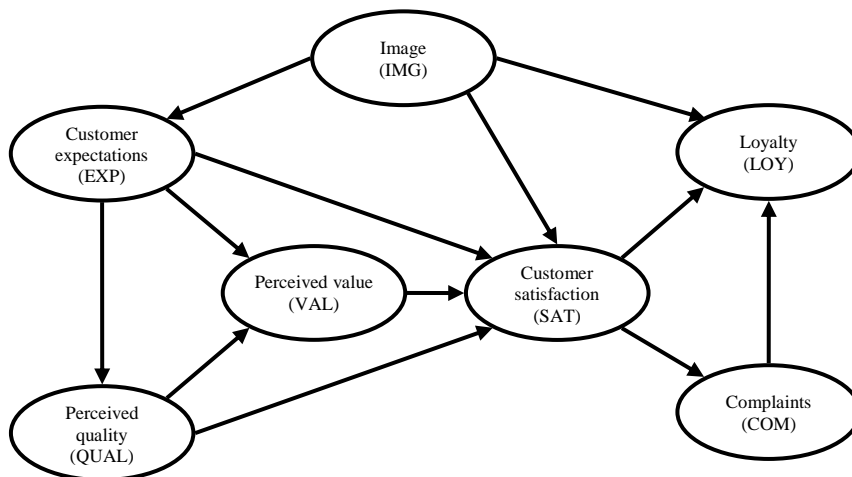
### 1.1 Model of European Customer Satisfaction Index

The Swedish Customer Satisfaction Barometer (SCSB) proposed by Fornell (1989) was the first customer satisfaction model broadly popularized within literature. The ECSI (European Consumer Satisfaction Index) has evolved from the American Customer Satisfaction Index model (ACSI). The ECSI is an indicator that measures customer satisfaction. It has been developed by the EOQ (European Organisation for Quality) and EFQM (European Foundation for Quality Management) (Grigoroudis and Siskos, 2004). It has been validated across a number of European countries and many industries (Ball et al. 2004).

Model of European Customer Satisfaction Index contains seven latent variables. The antecedents of satisfaction in this model are: perceived quality, value, image and customer expectation. While the consequences of satisfaction are: complaints and loyalty. The complaint behaviour and image in the model are used optionally. Figure 1 shows the relation between variables in this model.

Latent variables are equipped in proper manifest variables, which are measured in a consumer survey. Associations between manifest and latent variables are described using a set of equations with unknown coefficients. These coefficients are estimated using partial least squares (PLS) on maximum likelihood approach (ML). As a result, we get so called path coefficients, which determine the scale of the impact of variables on each other and its significance.

**Figure 1: Model of European Customer Satisfaction Index Used in the Study**



Source: Cassel and Eklöf (2001)

The ECSI model has many modifications e.g. additions of subsequent elements. They may have the character of exogenous and endogenous variables. For example, Kaveh et al. (2012) proposed a revised model where perceived value has an impact on satisfaction, which, in turn, is an antecedent to customer trust and repurchase intention. While perceived value is assumed to result from four factors i.e. the core service provided (technical dimensions), perceptions of

service processes (functional dimensions), the image and the price. Table 1 shows selected variables proposed by various authors as a modification of the ECSI model.

**Table 1: Variables Proposed as a Modification of ECSI Model**

<b>Authors</b>	<b>Variables</b>
Ball and Machas (2004)	communications and trust
Haq (2012)	trust and customer education
Magalhães (2009)	switching costs and attractiveness of alternatives
Ryglová and Vajčnerová (2005)	customer complains
Kaveh et al. (2012)	trust, repurchase intention, price, technical dimension, functional dimension
Ciavolino and Dahlgaard (2007)	hardware, software
Eurico et al. (2015)	employability

Source: authors' elaboration.

The ECSI model construction allows a calculation of the customer satisfaction index. Kristensen, Martensen and Grønholdt (2002) indicate several advantages of the concept. These are:

- to deliver useful information to the company's general measurement system,
- to provide useful information on customer satisfaction to the public authorities and organizations e.g. the dynamics and measurement of productivity, price and inflation,
- could lead to a sharper focus on quality and the customer,
- could increase the welfare of customer and the competitiveness of the country,
- helps to answer questions about European economy as a whole,
- using ECSI measures, customer satisfaction inside specific industries can be compared with each other and with the European average, and this could lead to increased competitiveness, further development, and the promotion of European quality,
- will benefit European customers by giving voice to their evaluations of the products and services they buy and use.

## 2. Problem Formulation and Methodology

The main goal of this article was to compare the results of the research carried out by the authors with the results of similar research performed in Lithuania. The comparison is interesting because both countries have common historical ties, both have experiences from the Eastern Bloc and their contemporary markets have shaped at the same time after 1989. However, we cannot forget about the differences between them: Polish market is larger than Lithuanian one and there are some differences in customer behaviours.

Lithuanian research results were announced by Pilelienė and Grigaliūnaitė (2013). They conducted their survey on February 2013. They carried out their survey in person and via the Internet. They gathered a sample of 250 supermarkets' clients and used the concept of ECSI model. Following their methodology, we ran a similar test in Poland. Due to this – the results of which are comparable. In the study the Lithuanian results will be marked as LT, and Polish – PL.

## 2.1 Model and Data

As a framework for our research we used the European Customer Satisfaction Index model shown in Figure 1.

In the measurement model we used a set of manifest variables adopted from Pilelienė and Grigaliūnaitė (2013). In contrast to our Lithuanian colleagues, we did not measure the variables on a 10 point scale but we used a 5-point Likert's scale, from 1 – „I do not agree at all” to 5 – „I extremely agree”. There were no reverse-scaled items.

Manifest variables were measured in a survey using a self-developed questionnaire. The questionnaire consisted of two parts, the first one described the profile of the customer, and the second, allowed to measure manifest variables. Every respondent had a possibility to assess 1-3 supermarkets.

The questionnaires were distributed in southern Poland (Silesian and Lesser Poland Voivodeships, Poland), using a snowballing method. In return, we received over 200 questionnaires, but because of missing data only 205 were used for modelling. Table 2 shows the structure of the sample in comparison with Lithuanian study.

**Table 2: Structure of the Sample in Comparison with Lithuanian Study**

PL	Percent	LT	Percent
Gender		Gender	
Female	74.0%	Female	52.0%
Male	26.0%	Male	48.0%
Age		Age	
no data	2.0%	no data	1.0%
less 18 y.o.	1.0%	less 18 y.o.	1.0%
18 – 25	36.0%	18 – 25	37.0%
26 – 40	31.0%	26 – 35	36.0%
40 – 65	27.0%	36 – 45	16.0%
more than 65	3.0%	46 – 55	8.0%
		more than 55	2.0 %

Source: Pilelienė and Grigaliūnaitė (2013) and authors' elaboration.

For constructing the model, we used software dedicated to structural equation modelling (SEM), using partial least square methods (PLS) with bootstrap methods.

## 3. Problem Solution

Firstly, we verified the internal consistency of the measurement model used in our research. For this verification Cronbach's alpha coefficient and Composite Reliability (CR) coefficient and Average Variance Extracted (AVE) were used. In this case Cronbach's alpha and CR significantly exceeded their threshold values (0.7) and AVE took values of over 0.5 which indicates, that the measurement model is internally consistent (cf. Biesok and Wyród-Wróbel, 2016). Table 3 shows the results of the verification and its comparison to the Lithuanian study.

The evaluation of the measurement model gave positive results so in the next step we were able to determine the internal structure of the model. Tables 4 and 5 present the results of the modelling. Using bold font, we marked path coefficient which have a significance level of  $p < 0.001$ .

**Table 3: Evaluation of the Measurement Model**

Variables	Items	Composite reliability		Cronbach's $\alpha$		AVE	
		LT	PL	LT	PL	LT	PL
Complaints	1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Customer Expectations	2	0.8996	0.8733	0.7769	0.7098	0.8175	0.7739
Customer Satisfaction	3	0.9284	0.9134	0.8843	0.8574	0.8122	0.7784
Image	5	0.8794	0.9008	0.7953	0.8618	0.7085	0.6456
Loyalty	2	0.9411	0.8687	0.8754	0.6978	0.8887	0.7673
Perceived Quality	6	0.9117	0.8813	0.8709	0.8377	0.7209	0.5525
Perceived Value	2	0.9487	0.9246	0.8919	0.837	0.9024	0.8592

Source: Pilelienė and Grigaliūnaitė (2013) and authors' calculations

Results of our research showed a considerable similarity to the Lithuanian results. Both studies have not confirmed the significant impact of customer expectations on perceived quality and perceived value. There was also no relationship between potential complaints and customer loyalty.

**Table 4: Modelling Results – Paths in the Inner Models**

Model path	LT		PL	
	Coeff.	p-value	Coeff.	p-value
Complaints > Loyalty	0.0641	0.457	0.0605	0.474
Customer Expectations > Customer Satisfaction	0.1191	0.013	-0.0850	0.065
Customer Expectations > Perceived Quality	<b>0.5273</b>	<b>0.000</b>	<b>0.4240</b>	<b>0.000</b>
Customer Expectations > Perceived Value	0.0096	0.847	-0.0811	0.232
Customer Satisfaction > Complaints	<b>0.6509</b>	<b>0.000</b>	<b>0.5507</b>	<b>0.000</b>
Customer Satisfaction > Loyalty	<b>0.5449</b>	<b>0.000</b>	<b>0.9338</b>	<b>0.000</b>
Image > Customer Expectations	<b>0.6333</b>	<b>0.000</b>	0.6804	0.004
Image > Customer Satisfaction	0.0215	0.644	<b>0.2617</b>	<b>0.000</b>
Image > Loyalty	0.1216	0.075	0.3635	0.006
Perceived Quality > Customer Satisfaction	<b>0.3081</b>	<b>0.000</b>	<b>0.7040</b>	<b>0.000</b>
Perceived Quality > Perceived Value	<b>0.7859</b>	<b>0.000</b>	<b>0.6641</b>	<b>0.000</b>
Perceived Value > Customer Satisfaction	<b>0.5354</b>	<b>0.000</b>	<b>0.2498</b>	<b>0.000</b>

Source: Pilelienė and Grigaliūnaitė (2013) and authors' calculations

On the other hand, in the Polish studies, a greater impact of perceived quality on satisfaction, and a smaller impact of perceived value are shown. In the Lithuanian results, the perceived value had a greater impact on customer satisfaction. You can also see a considerable difference in the impact of image on customer satisfaction. It is significant in our results, but insignificant in the Lithuanian study.

Customer satisfaction has a bigger determination in the Lithuanian model – over 77.5% of its variance is explained by the model. In the Polish research, the determination of satisfaction is lower, so it can be expected that there are still some factors outside the model, which can have an influence on customer satisfaction and must be considered in future research. Similarly, the perceived value in the Polish model is completely indeterminate.

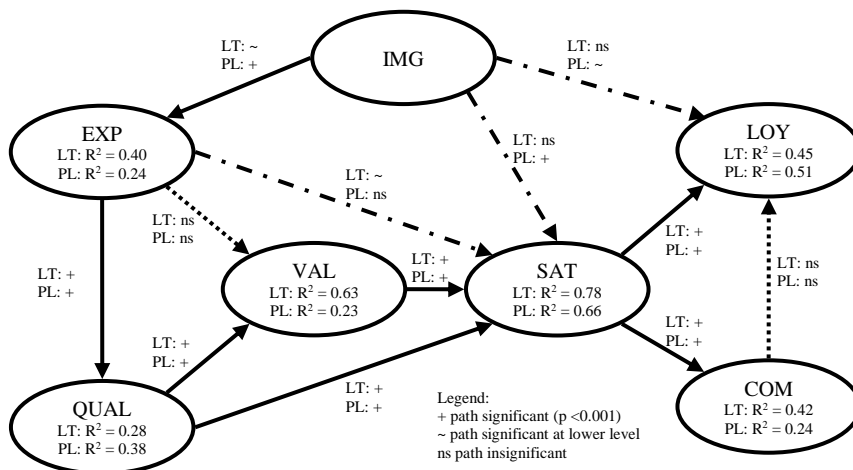
**Table 5: Comparison of Determinations and Latent Variables Indexes (LVI)**

Variables	R <sup>2</sup>		LV Index	
	LT	PL	LT	PL
Complaints	0.4236	0.2412	60.08	62.927
Customer Expectations	0.4010	0.2370	67.636	63.036
Customer Satisfaction	0.7753	0.6639	62.811	57.411
Image	–	–	65.878	58.974
Loyalty	0.4499	0.5147	72.207	65.468
Perceived Quality	0.2781	0.3764	63.923	62.778
Perceived Value	0.6258	0.2291	61.776	67.245

Source: Pilelienė and Grigaliūnaitė (2013) and authors’ calculations.

The analysis of Latent Variables indices shows that in both studies they obtained a similar value. The Lithuanian results show a higher level of customer loyalty. In both models customer satisfaction expressed with the LV index level is average (LT: 62.811, PL: 57.411). Comparison of determined models is shown in Figure 2.

**Figure 2: Comparison of Determined Models in the Polish and Lithuanian Study**



Source: authors’ elaboration. Significances at level 0.001.

### 4. Conclusion

Despite the fact that both studies were conducted in different geographical regions and they concerned different groups of clients, their results show significant similarities. The mechanism of satisfaction shaping is based on the common core: image affects the expectations of customers, expectations shape the perceived quality and value, and both these factors affect satisfaction. The difference is in the strength of these factors. The Lithuanian results show a greater impact of perceived value on customer satisfaction, and Polish – a greater importance of perceived quality.

Both studies did not confirm the direct impact of customer expectations on satisfaction. This is an interesting observation, because this dependence is one of the foundations of the ECSI

model. Perhaps the reason for this is the specificity of the countries of Central and Eastern Europe and differently shaped customer expectations.

In the Lithuanian research, customer satisfaction and perceived value are more determined by the model. The Polish results show that there are some factors outside the model that shape these constructs. Future research should find these factors and the model should be supplemented with them. Perhaps this will lead to the creation of a specific customer satisfaction model adequate to the Polish market.

Both studies also show the difference in the impact of image on customer satisfaction. This may be due to cultural differences, but this hypothesis would require further comparative research.

Two factors could have influenced the differences in results. First of which is different gender structure. Our respondents were dominated by women, which could have had an influence on the model, particularly on perceived quality and perceived value. In further studies, modelling should be carried out on both genders separately and the results should be compared with each other.

The second element influencing the results can be the scale. Based on our previous experience, we have used a five-point scale, which is more readable for respondents (cf. Biesok and Wyród-Wróbel, 2016), while Lithuanian colleagues used a 10-item scale following Coelho and Esteves (2006), who claim that this kind of scale is more accurate. Kristensen and Esklidsen (2010) showed, that 10-point scale gives smaller standard deviation, so we assume that changing the scale have not had an influence on statistical significant elements in the model. But the impact of this change on insignificant relationships is an open issue.

In future research, especially in Poland, the focus should be on extending the model with other variables that increase the determination of the perceived value. We also need to expand the measurement model, because the variable complaints and loyalty in the presented approach were poorly equipped with manifest variables.

## References

- [1] Ball, D. and Machas, A. (2004). *The role of communication and trust in explaining customer loyalty: An extension to the ECSI model*. *European Journal of Marketing*, vol. 38, no. 9/10, pp. 1272–1293.
- [2] Biesok, G. and Wyród-Wróbel, J. (2016). *Modele satysfakcji klienta*. Warszawa: Difin.
- [3] Bruhn, M. and Grund, M.A. (2000). Theory, Development, and Implementation of National Customer Satisfaction Indices: The Swiss Index of Customer Satisfaction (SWICS), *Total Quality Management*, vol. 11, iss. 7, pp. 1017–1028.
- [4] Cassel, C. and Eklöf, J. A. (2001). *Modelling customer satisfaction and loyalty on aggregate levels: Experience from the ECSI pilot study*. *Total Quality Management*, vol. 12, iss. 7-8, pp. 834–841.
- [5] Chiu, S.-I., Cheng, C.-C., Yen, T.-M., Hu, H.-Y. (2011). *Preliminary research on customer satisfaction models in Taiwan: A case study from the automobile industry*. *Expert Systems with Applications*, vol. 38, iss. 8, pp. 9780–9787.
- [6] Ciavolino, E. and Dahlgard, J.J. (2007). *ECSI – Customer Satisfaction Modelling and Analysis: A Case Study*. *Total Quality Management*, vol. 18, no. 5, pp. 545–554.



- [7] Coelho, P.S., and Esteves, S.P. (2007). *The choice between a five-point and a ten-point scale in the framework of customer satisfaction measurement*. *International Journal of Market Research*, vol. 49, iss. 3, pp. 313–339.
- [8] Deng W.J., Yeh W.J., Sung M.L. (2013). *A customer satisfaction index model for international tourist hotels: Integrating consumption emotions into the American Customer Satisfaction Index*. *International Journal of Hospitality Management*, vol. 35, pp. 133–140.
- [9] Eurico, S., Oom do Valle, P., Marques, C. and Silva, J.A. (2015) *Uncovering unobserved heterogeneity in the ECSI model: An application in higher education in tourism*. Proceedings of the 2nd International Symposium on Partial Least Squares Path Modeling, Available at: <http://hdl.handle.net/11441/55854>.
- [10] Grigoroudis, E., Siskos, Y. (2003), *A survey of customer satisfaction barometers: some results from the transportation-communications sector*, *European Journal of Operational Research*, vol. 152, no. 2, pp. 334–353.
- [11] Haq, A.U. (2012). *Satisfaction towards Customer Loyalty in Auto-Mobile Industry of Pakistan*. *International Journal of Management and Business Research*, vol. 2, no. 4, pp. 363–371.
- [12] Kaveh, M., Mosavi, S. A. and Ghaedi, M. (2012). *The application of European customer satisfaction index (ECSI) model in determining the antecedents of satisfaction, trust and repurchase intention in five-star hotels in Shiraz, Iran*. *African Journal of Business Management*, vol. 6, no. 1, pp. 6103–6113.
- [13] Kristensen, K. and Esklidsen, J. (2010). Design of PLS-based satisfaction studies. In Esposito Vinzi, V. et al. (eds.). *Handbook of partial least squares: Concepts, methods and applications*. Heidelberg–Dordrecht–London–New York: Springer, pp. 247-278.
- [14] Kristensen, K., Martensen, A. and Grønholdt L. (2002). Customer satisfaction and business performance. in: Nelly A. (ed.) *Business Performance Measurement*. Theory and Practice. Cambridge University Press.
- [15] Magalhães, S.H.J.P. (2009). *The differential effects of Switching Costs and Attractiveness of Alternatives on Customer Loyalty*. Dissertation submitted in partial fulfillment of the requirements for the Degree of Mestre em Estatística e Gestão de Informação (Master of Statistics and Information Management), Instituto Superior de Estatística e Gestão de Informação, Universidade Nova de Lisboa, November 2009.
- [16] Pilelienė, L. and Grigaliūnaitė, V. (2013). Determination of customer satisfaction with supermarkets in Lithuania. *Organizacijų Vadyba: Sisteminiai Tyrimai*, 66, pp. 99–114.
- [17] Ryglová, K. and Vajčnerová, I. (2005). *Potential for utilization of the European customer satisfaction index in agro-business*. *CAAS Agricultural Journal. Agricultural Economics (AGRICECON)* – Czech, vol. 51, 4, pp. 161–167.
- [18] Velčovská, Š. and Klapilová Krbová, P. (2016). Consumer Attitudes Towards Food Quality Labels in Selected European Union Countries. In *Proceedings of the 3rd International Conference on European Integration*. Ostrava, Czech Republic, Publisher: VŠB – Technical University of Ostrava, pp. 1068–1077.

## **Analysis of the Infrastructure of Social Services Facilities for the Elderly in Selected Regions of the European Union**

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### **Abstract**

*Social services play an irreplaceable role in supporting clients in their adverse social situation. The clients most commonly include persons with health and social problems that increase with their age, as a result they become more and more dependent on another person's expert support. Social services for the elderly are provided in various forms: in the ambulant, outreach and residential forms, as well as in the telecommunication form in justified cases. This work is dedicated to the analysis and subsequent comparison of the structure of social services facilities for the elderly in Trenčín and Žilina Self-Governing Regions in the Slovak Republic. It identifies key problems that social services facilities for the elderly in the above regions encounter and presents options through which the European social policy can be helpful in developing, modernizing and effectively adjusting these facilities from the standpoint of demand for the social services provided by them.*

**Keywords:** *European Union, regional policy of the European Union, social services, social services facilities, the elderly*

**JEL Classification:** *E62, I12, I31*

## **1. Introduction**

In the presented work we are focusing on social services facilities established under the authority of selected self-governing regions in Slovakia: Trenčín and Žilina Self-Governing Regions. Its contribution lies in timeliness, mapping the current situation and identifying trends that social service facilities in the regions will face in short and long term. It provides information about the structure of social service facilities in selected regions. By the way of introduction to discussing social services, it should be noted that they partially overlap with the wider category of public services.

## **2. Social Services in the Sphere of Public Administration**

*"Social services are defined as a significant part of the activities of the state, self-government and non-state actors that are provided to individuals, families and groups of people and contribute to solving social problems." (Halásková, Halásková, 2016). Matoušek (2011) writes that: "Unlike commercial services, they are financed from public budgets, are defined in more detail by legislation than other services, and as a result they depend more on the political decision-making of the state, regions and municipalities." Social services are specialized activities that are aimed at solving material or social need (Kostolanská, Baťová, 2003). In a*

publication written by Bočáková (2015) we learn that: *"Social services are usually understood to mean services of various social entities aimed at social needs of those people who would find themselves in a state of social need or at least at risk from it if they were not provided."* Social services play a protective role to the benefit of the citizen, by acting to their benefit. They are provided by public or private institutions – in this case the state acts as a guarantor of the observation of fundamental human rights and it must ensure, by periodic inspections of the activities of these entities and assigning licences, that these institutions will do what they undertook to do. Political parties were aware of the significance of the issue of social services to such a degree that it became a part of several election programmes of political parties running in the 2016 parliamentary election in Slovakia (Bočáková, Kubičková, Vavruš, 2016).

The legislative definition of social services in the Slovak Republic is elaborated on by Dávideková (2014) who states Act No 195/1998 Coll. on Social Support and then Act No 448/2008 Coll., which according to her: *"places emphasis on the specialization of individual expert activities by which it tries to solve and overcome an adverse social situation of the individual, family or group. Also the aims of social services are defined."*

*„Of course, the state has an interest in ensuring that those relationships are respected, because through these relations public funds are handled.“* (Koziel, 2016). *„The category of ‘senior citizens’ is one where biological, medical and sociological aspects intersect. The phenomena and processes of senescence are not just biological, but also psychological, cultural and social in character.“* (Smolík, Čeněk, 2017). Matoušek (2007) states a typology of social services according to target groups; in the context of this work the key ones are those that affect the elderly or whose output may be parallelly provided also by the elderly under certain circumstances: services for the elderly, services in response to poverty and homelessness, services for the disabled, services for the ill, services in response to crises and services for people suffering from mental illnesses, services for people with addictions, services related to the administration of justice. *"Formation of local self-governments in the Slovak Republic has begun to take place since its independence in 1993."* (Uramová, Šuplata, Kollár, 2015). Public establishers of social services facilities also include self-governing regions (higher territorial units) that provide social services; we state those that relate to the elderly: homes for the elderly, social care centres, rehabilitation centres, social care homes for adults providing week-long or year-long care, reception centre (Matoušek, 2007). Higher territorial units obtained powers in the field of social services during decentralization processes that were realized in accordance with the accepted principles stated by Bočáková, Kubičková (2016): *"effectiveness, economy, availability of social services, the provision in the interest of and according to the needs of the inhabitants of a region's self-governing area."* Higher territorial units represent administrative bodies in the following areas: reliance on the social service, end of reliance on the social service, parents' or children's obligation to pay for the social service, prohibiting the provision of the social service, deciding not to enter into the register of social service providers, deleting social service providers from the register, drawing up an assessment of reliance on the social service. (Bočáková, Kubičková, 2015).

### **3. Infrastructure of Social Services Facilities Established under the Authority of Žilina Self-Governing Region**

Žilina Self-Governing Region has established twenty-six social services facilities for the elderly. In Žilina district it has established six facilities in total, specifically homes for the elderly and social care homes, while some provide also other social services for various target groups. The capacity is 86 places in the homes for the elderly, and 438 places in the social care homes. In Kysucké Nové Mesto district the self-governing region has established two

facilities, while their common capacity reaches 31 places in a home for the elderly and 96 places in social care homes. A list of facilities with their specific capacities is presented in Table 1.

**Table 1: Social Services Facilities for the Elderly Established under the Authority of Žilina Self-Governing Region in Žilina District**

Name of the social services facility and its seat	Capacity of the home for the elderly	Capacity of the social care home	Other provided social services
<b>Žilina district</b>			
HARMÓNIA – Home for the Elderly, Social Care Home and Reception Centre (Žilina)	6	25	specialized institution, supported housing, halfway house
Home for the Elderly and Social Care Home Terchová (Terchová, Zázrivá)	5 (2+3)	23 (16+7)	specialized institution
Social Services Centre Letokruhy (Žilina)	75 (60+15)	164 (78+86)	specialized institution
Social Services Centre STRANÍK (Teplička nad Váhom, Žilina)	It is not provided	71 (57+14)	specialized institution
Social Services Centre TAU (Turie)	It is not provided	40	specialized institution, supported housing
Social Care Home SYNŇNÓMIA (Žilina)	It is not provided	85 (65+20)	–
Social Services Centre LÚČ (Žilina)	It is not provided	30	specialized institution, supported housing, emergency housing, reception centre
<b>Kysucké Nové Mesto district</b>			
Social Services Centre Kamence (Kysucké Nové Mesto)	31	59 (38+21)	specialized institution
Social Services Centre Fantázia (Kysucké Nové Mesto, Horný Vadičov)	It is not provided	37 (29+8)	specialized institution

Source: Žilina Self-Governing Region

In Bytča district Social Services Centre LÚČ provides its services – it is the only public provider in the district established under the authority of the higher territorial unit. Its capacity is 8 places in a social care home. In Turčianske Teplice, Social Services Centre Horný Turiec is located – its capacity is 40 places in a home for the elderly and 83 places in a social care home. In Čadca district the self-governing region has established four facilities, while their total capacity is 87 places in homes for the elderly and 335 places in social care homes. Tvrdošín district has one facility with a capacity of 44 places in a social care home and one

place in a home for the elderly. An overview of social services facilities and their capacities in Bytča, Turčianske Teplice, Čadca and Tvrdošín districts is shown in Table 2.

**Table 2: Social Services Facilities for the Elderly Established under the Authority of Žilina Self-Governing Region in Bytča, Turčianske Teplice, Čadca a Tvrdošín Districts**

Name of the social services facility and its seat	Capacity of the home for the elderly	Capacity of the social care home	Other provided social services
<b>Bytča district</b>			
Social Services Centre LÚČ (Bytča)	It is not provided	30	specialized institution, reception centre
<b>Turčianske Teplice district</b>			
Social Services Centre Horný Turiec (Turčianske Teplice)	40	83	specialized institution
<b>Čadca district</b>			
Social Services Centre Žarec (Čadca, Čierne)	38 (26+12)	100 (85+15)	specialized institution
Social Services Centre Horelica (Čadca)	25	98 (50+48)	specialized institution, early intervention services
Social Services Centre PARK (Čadca, Krásna nad Kysucou)	24 (20+4)	42 (40+2)	specialized institution
Social Services Centre Slniečko (Oščadnica)	It is not provided	95	specialized institution
<b>Tvrdošín district</b>			
Social Services Centre ORAVA (Tvrdošín)	1	44 (42+2)	specialized institution

Source: Žilina Self-Governing Region

Žilina Self-Governing Region has established two social services facilities in each of Námestovo, Dolný Kubín, Ružomberok and Martin districts and three social services facilities in Liptovský Mikuláš district. In Námestovo the homes for the elderly have the capacity of 27 places and social care homes 129 places. There are 40 places in homes for the elderly and 62 places in social care homes in Dolný Kubín. Homes for the elderly have the capacity of 52 places in Ružomberok district, 43 places in Liptovský Mikuláš district and 40 places in Martin district. Social care homes have the capacity of 181 places in Ružomberok district, 142 places in Liptovský Mikuláš district and 129 places in Martin district.

**Table 3: Social Services Facilities for the Elderly Established under the Authority of Žilina Self-Governing Region in Martin, Námestovo, Dolný Kubín, Ružomberok and Liptovský Mikuláš Districts**

Name of the social services facility and its seat	Capacity of the home for the elderly	Capacity of the social care home	Other provided social services
<b>Martin district</b>			
Social Services Centre Ľadoveň (Martin)	40	40	specialized institution
Social Care Home Méta (Martin, Lipovec, Sučany)	It is not provided	89 (32+20+37)	specialized institution
<b>Námestovo district</b>			
Social Services Centre STUDIENKA (Novoť)	15	45	specialized institution
Social Care Home and Home for the Elderly Zákamenné (Zákamenné, Oravská Lesná, Zubrohlava)	12	84 (42+35+7)	specialized institution
<b>Dolný Kubín district</b>			
Home for the Elderly and Social Care Home Dolný Kubín (Dolný Kubín)	40	20	specialized institution
Social Services Centre PRAMENĚ (Dolný Kubín)	It is not provided	42	emergency housing, reception centre
<b>Ružomberok district</b>			
LIKAVA – Social Services Centre (Likavka)	22	121	specialized institution
TROJLÍSTOK – Social Services Centre (Ružomberok)	30	60 (15+45)	specialized institution, rehabilitation centre
<b>Liptovský Mikuláš district</b>			
Social Services Centre ANIMA (Liptovský Mikuláš)	43	45	specialized institution, reception centre, crisis centre, emergency housing
Social Care Home and Specialized Institution Liptovský Hrádok (Liptovský Hrádok, Smrečany)	It is not provided	56 (25+31)	specialized institution
Social Services Centre EDEN (Liptovský Hrádok)	It is not provided	41	specialized institution

Source: Žilina Self-Governing Region

#### 4. The Infrastructure of Social Services Facilities Established under the Authority of Trenčín Self-Governing Region

Trenčín Self-Governing Region has established five social services facilities in Trenčín district, while the capacity of social care homes is 299 places. In 2017, the self-governing region allocated 20.9 mil. EUR. Of which 19.7 mil. EUR for contributory organizations and 1.2 mil. EUR for public and non-public providers of social services (TSK, 2017). There are 272 places in two facilities in Ilava district. In Púchov district four social care homes have the capacity of 158 places. The northernmost district of Trenčín region – Považská Bystrica district – has two facilities with the capacity of 159 places. An overview of social services facilities in Trenčín, Ilava, Púchov and Považská Bystrica districts and their capacities is shown in Table 4.

**Table 4: Social Services Facilities – Social Care Homes Established under the Authority of Trenčín Self-Governing Region in Trenčín, Ilava, Púchov and Považská Bystrica Districts**

Name of the social services facility and its seat	Capacity of the social care home	Other provided social services
<b>Trenčín district</b>		
Social Services Centre – LIPOVEC (Horné Srnie)	20	specialized institution
Social Services Centre – LIPA (Kostolná – Záriečie)	65	–
Social Services Centre – Juh (Trenčín)	86	specialized institution, supported housing
Social Services Centre – DEMY (Trenčín)	50	–
Social Care Home – Adamovské Kochanovce	78	–
<b>Púchov district</b>		
Social Services Centre – Lednické Rovne (Lednické Rovne)	10	specialized institution
Social Services Centre – KOLONKA (Púchov)	38	specialized institution
Social Services Centre – Chmelinec (Púchov)	70	specialized institution
Social Care Home – Púchov – Nosice (Púchov)	40	–
<b>Ilava district</b>		
Social Services Centre – AVE (Dubnica nad Váhom)	58	–
Social Services Centre – LÚČ (Pruské)	–	specialized institution
Social Services Centre – SLOVEN (Slávnica)	214	–
<b>Považská Bystrica district</b>		
Social Services Centre – BYSTRICĀN (Považská Bystrica)	80	specialized institution, reception centre
Social Services Centre – NÁDEJ (Dolný Lieskov)	79	specialized institution, supported housing

Source: Trenčín Self-Governing Region

The self-governing region has established one social services facility in Myjava, Bánovce nad Bebravou and Partizánske districts. In Prievidza district Trenčín Self-Governing Region has established three facilities with the total capacity of 249 places. In Nové Mesto nad Váhom district four social services facilities with the total capacity of 157 places have been established. An overview of the facilities and their capacities in Bánovce nad Bebravou, Myjava, Nové Mesto nad Váhom, Partizánske and Prievidza districts is shown in Table 5.

**Table 5: Social Services Facilities – Social Care Homes Established under the Authority of Trenčín Self-Governing Region in Bánovce nad Bebravou, Myjava, Nové Mesto nad Váhom, Partizánske and Prievidza Districts**

Name of the social services facility and its seat	Capacity of the social care home	Other provided social services
<b>Bánovce nad Bebravou district</b>		
Social Services Centre – Bánovce nad Bebravou (Bánovce nad Bebravou)	24	specialized institution
<b>Myjava district</b>		
Social Services Centre – Jesienka (Myjava)	69	specialized institution
<b>Nové Mesto nad Váhom district</b>		
Social Services Centre – DOMOV JAVORINA (Bzince pod Javorinou)	16	specialized institution
Social Services Centre – Nová Bošáca (Nová Bošáca)	15	specialized institution, supported housing
Social Care Home – Zemianske Podhradie (Zemianske Podhradie)	15	–
Social Services Centre in Nové Mesto nad Váhom (Nové Mesto nad Váhom)	46	specialized institution
<b>Partizánske district</b>		
Social Services Centre – Partizánske (Partizánske)	60	specialized institution
<b>Prievidza district</b>		
Social Services Centre – Bôrik (Nitrianske Pravno, Vyšehradné)	150	supported housing, specialized institution
Social Services Centre – DOMINO (Prievidza)	40	early intervention service, crisis centre
HUMANITY – Social Support Centre Veľká Lehôtka (Prievidza)	59	reception centre

Source: Trenčín Self-Governing Region.

## 5. Conclusion

As of 1<sup>st</sup> of July 1998 self-governing regions have had significant powers in terms of social support – social services. The role of social services is indispensable for the recipient since they saturate both health and social support. It follows from the analysis of social services infrastructure in Trenčín and Žilina Self-Governing Regions that these authorities exercise their powers and establish social services facilities – they are present in every district of both regions. Trenčín Self-Governing Region has established 23 social services facilities in total, while the capacity of social care homes is 1,447 places. Žilina Self-Governing Region has established 24 social services facilities – the capacity of social care homes is 1,677 places in



total, and there are further 447 places in homes for the elderly. The key problem of social service facilities not only in Žilina and Trenčín self-governing regions, but throughout Slovakia is insufficient capacity for accepting applicants for social service facilities. It is also desirable to increase funding for reconstruction of buildings, to revitalize the near vicinity of these facilities, to purchase new equipment, to increase the salaries of professional staff, but also to improve and expand leisure activities they offer to their clients. Capacity of social service facilities is currently insufficient in both self-governing regions, as waiting times arises when clients are accepted in individual facilities. The longest waiting times are for public service facilities because their services are more affordable for applicants for social services, such as those receiving old-age or early retirement pensions which are low. To satisfy larger number of applications in the shortest possible time, it is desirable to extend current capacity of public providers or to establish entirely new social service facilities. The adverse development of natality and ageing of the population will result in rising pressure on increasing the capacity of social services facilities. The European Union can be helpful to member states by taking part in making financial investments in social services. The way how to integrate social policies of member states, interconnect social states and unite them continues to be the problem as well as challenge for the whole of the European Union.

## References

- [1] Bočáková, O. (2015). *Sociálna politika a sociálne zabezpečenie (Social policy and social security)*. Brno: Tribun EU.
- [2] Bočáková, O. and Kubičková, D. (2015). *Úvod do sociálnych služieb (Introduction to the social services)*. Brno: Tribun EU.
- [3] Bočáková, O., Kubičková, D. and Vavruš, M. (2016). *Sociálna politika vo volebných programoch vybraných politických strán na Slovensku (Social policy in electoral programmes of selected political parties in Slovakia)*. Brno: Tribun EU.
- [4] Bočáková, O. and Kubičková, D. (2016). *Social Cohesion Between Regions: Bratislava Region and Košice Region*. In Proceedings of the 3rd International Conference on European Integration 2016. Ostrava: VŠB - Technical University of Ostrava, pp. 108-115. WOS:000387986300011.
- [5] Dávideková, M. (2014). *Sociálne služby (Social services)*. Trnava: Univerzita sv. Cyrila a Metoda, Fakulta sociálnych vied.
- [6] Halásková, R. and Halásková, M. (2016). Evaluation of selected social services for the elderly in regions of the Czech Republic. In Klímová, V. and Žitek, V. (eds.). *19th International Colloquium on Regional Sciences. Conference Proceedings*. Brno: Masarykova univerzita, pp.497-503. DOI: 10.5817/CZ.MUNI.P210-8273-2016-64.
- [7] Kostolanská, V. and Baťová, K. (2003). *Spríevodca po sociálnych službách v regiónoch Slovenska Žilinský kraj. (Guide to Social Services in the Regions of Slovakia. Žilina region)*. Bratislava: SPACE – Centrum pre analýzu sociálnej politiky.
- [8] Koziel, M. (2016). *Breach of Budgetary Discipline as a Direct Consequence of the Breach of Conditions in the Management of the EU Funds*. In Proceedings of the 3rd international conference on European Integration 2016 (icei 2016). WOS:000387986300054.

- [9] Matoušek, O. et al. (2011). *Sociální služby. Legislativa, ekonomika, plánování, hodnocení (Social services. Legislation, economics, planning, evaluation)*. Praha: Portál.
- [10] Matoušek, O. et al. (2007). *Sociální služby. Legislativa, ekonomika, plánování, hodnocení (Social services. Legislation, economics, planning, evaluation)*. Praha: Portál.
- [11] Smolík, J. and Čeněk, J. (2017). What troubles our senior citizens? Crime against the elderly in the Czech Republic in 2016. *Kontakt*, vol. 19, iss. 1, 1 March 2017, pp. e36-e42. DOI: 10.1016/j.kontakt.2017.01.004
- [12] Trenčiansky samosprávny kraj (The self-governing region of Trenčín). (2018). *ZSS v zriaďovateľskej pôsobnosti TSK (ZSS in the founding jurisdiction of TSK)* [online]. [cit.2018-02-25]. Available at: <https://www.tsk.sk/buxus/docs/ZSS%20v%20posobnosti%20TSK.pdf>
- [13] Uramová, M., Šuplata, M. and Kollár, J. (2015). *Social policy in context of municipal economy execution*. In Klímová, V. and Žitek, V. (eds.). 18th International Colloquium on Regional Sciences. Conference Proceedings. Brno: Masarykova univerzita, pp. 398-404. DOI: 10.5817/CZ.MUNI.P210-7861-2015-53.
- [14] Žilinský samosprávny kraj (The self-governing region of Žilina). (2018). Odbor sociálnych vecí. [online]. [cit.2018-02-25]. Available at: <http://www.regionzilina.sk/sk/samosprava/urad-zsk/odbor-socialnych-veci/>

## **Possibilities of Multi-Source Financing of Social Services Facilities in the Selected Member States of the European Union**

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### **Abstract**

*Innovations in the medicine, increasing average age of life expectancy, increasing economic demands of an individual, change in the life style of the majority of society, change in social values and other factors cause that on average a human being reaches a higher age and requires not only health care, but also social and nursing care, which in combination with stagnation of reproduction processes causes increasing pressure of social services facilities and subsequently also on public finances. In our paper we pay attention to the possibilities of participation in other financial sources in functioning of the social services facilities in the Czech and in the Slovak Republic. Experience shows that funds earmarked for functioning and development of social services facilities are insufficient and inadequate in both member states. The presented paper deals with the possibilities of participation of other than state finances not only in the operation of social services facilities, but also in their development and flexible introduction of innovations into practice.*

**Keywords:** *European social policy, European Union, financing of social services, member states of the European Union, social services*

**JEL Classification:** *E62, I31, I12*

### **1. Introduction**

From methodological point of view, in this article we apply method of description when describing the current state of social services in the Slovak Republic and the Czech Republic. At the same time, we use the method of studying the documents, by which we support our own statements given in presented article. We analyze the sources that are mentioned in the text as well as valid legislation that affects the legal framework of social services. Through the analysis method, we explore the broader context of funding of social services.

*"Social policy is one of the key areas of public policy interests." (Mandys, Mojžišová, 2015). Social policy is based on the system of values (solidarity, equality, humanism, freedom, responsibility, social justice, etc.), it requires intensive flow of funds from the state budget and from the budgets of regions and municipalities and from the sources of civil society.*

*"The role of the state is to balance internal pressures and to act in a cohesive manner in order to make social reconciliation in society." (Horváth, 2013). „The main objective of European Union is to ensure the harmonious development of the territory and all of its parts.“ (Rentková, Roštárová, Mazanovský, 2016).*

Social services help a human being to secure basic conditions of life, to acquire social stability and help them to restore their social independence and sovereignty (Cibáková and col., 2012).

*„Adequate allocation and development of social infrastructure in rural areas has been recognized at the level of the European Union as the factors of better opportunities for integration of the elderly into society.“ (Kiaušienė, Vaznonienė, 2016).*

## **2. Financing of Social Services in the Slovak Republic**

In 1989 transformation processes started changes in the area of social services, which were emphasised by decentralisation processes of public administration. These changes brought space for multi-source financing. According to collective of authors Oláh, Iglarová and Bujdová (2013): multi-source financing is to lead to quality increase of provided services, but also to financial co-participation of social services recipients. Professor Malíková (2007) in expressing herself in this context that in social services new conditions led to appearance of alternative forms of providers of services. *“New forms of providers were formed, such as e.g. church providers, non-profit organisations etc. In the same period the law made it possible also for self-governments to provide social services, but only on voluntary basis. Later upon decentralisation all self-governments took over responsibility for provision of social services (July 2004) and existing (state) facilities were transferred into their competence.”* In financing of social services an important role is played by the factor of the public - i.e. whether it is a public or a non-public provider. In case of public providers social services provided by them can be financed from the following sources:

- from the budget of public provider of public service;
- from the payments for social services from the recipient of social service, on the basis of a contract regarding providing social service;
- from the funds received on the basis of written donation contract;
- from the funds of association of municipalities, association of higher territorial units and association of persons;
- from the result of business from non-core activity, which are carried out by the facilities in the founder's competence of the municipality or of a higher territorial unit with its consent;
- from revenues from social enterprise (according to Section 50b Act No. 5/2004 Coll. on Employment Services);
- by a natural person or by a legal person, which employs handicapped job-seekers in the min. number of 30% of the total number of employees, provides support and assistance in finding an employment in the open labour market, at least 30% from the funds acquired from the income of the object of business, which will remain, after all expenses for the subject matter of activity for the respective tax period according to the tax return has been used every year for creating of new work positions or for improving of social conditions, it is registered in the register of social enterprises, it can provide social services and it can be a public or non-public provider;
- from the subsidy of the Ministry of labour, social affairs and family of the Slovak Republic;
- from other sources (Oláh, Iglarová, Bujdová, 2013).

The possibilities of obtaining financial means for setting up, operation and development of social services in case of non-public providers are different from the possibilities, which are available to the public providers (Lukáč, Hájek, 2016). The author Dávideková (2014) is stating the sources for financing of social services facilities in the founders competence of non-public providers:

- from the financial contribution in case a natural person is dependent on the assistance of another natural person in acts of self-service and from financial contribution for operation under conditions provided by Act. No. 448/2008 Coll.;
- from the payments for social services from the recipient of social service, on the basis of a contract regarding providing social service;
- from own sources of non-public provider of social service;
- from the funds received on the basis of written donation contract;
- from the result of business, from business activity after having been taxed by the income tax, which is performed by a non-public provider of social service according to specific legislation (e.g. Section 23 Act No. 455/1991 Coll. Trade Act);
- from the profits from social enterprise;
- or from other sources.

In the context of the fact that each social service has to be paid in a certain way the authors Bočáková and Kubičková (2015) are saying: *“By legislative amendment No. 448/2008 Coll. the public and non-public providers of facilities of social services have been made equal in the issue of providing of state contribution in the amount of €320 for one client and for one month for facilities for seniors.”* In the practice it happens that a client becomes insolvent and is not capable to pay all charges connected with their placement in the facilities of social services or with use of social service. Most often they old age pensioners, whose amount of pension is low - subsequently they become non-payers and debtors and the financial burden has to be solved by their relatives otherwise they get into more unfavourable situation with financial debts against the social services facility. Social services can be provided by the general or third, i.e. by non-government sector. Dohnalová (2012) is saying that the third sector is often connected with economics and is adding that civil sector and social economy represent mostly overlapping areas. As Cibáková (2012) is stating we distinguish four legal forms of organisations providing social services, namely:

- associations - their purpose is to associate person in order to satisfy their own interests. These are various clubs, societies, unions, movements, clubs etc.
- foundations - they are special purpose associations of assets. Their substance is assets created by a set of things, monetary means, securities and other monetary values, which are intended for performance of generally beneficial purpose;
- non-profit organisations providing generally beneficial services - these are in particular activities focused on providing health care, development and protection of spiritual and cultural values, additional education of children and youth, development of sports and physical education and they are accessible to all users in the same scope in the same area;
- non-investment funds - they associate funds intended for financing of generally beneficial targets, these funds can be provided not only to non-profit organisations, but also for individual specified humanitarian assistance (e.g. financing of concrete operation, purchase of health facility, etc.) (Cibáková and col., 2012).

### 3. Financing of Social Services in the Czech Republic

*“In the system of social services in the Czech Republic are gradually implemented changes in the responsibility for social services from the state to regions, municipalities and individuals.”* (Halásková, Halásková, 2016). A great number of criteria and factors have impact on the characteristics of appearing system of financing and providing of long term social and health care and the following criteria may be ranked as the most important:

- criteria for setting the rate of dependence;
- structure of users of individual types of social services from the point of view of their dependence;
- criteria for awarding subsidies by the state - Ministry of labour and social matters of the Czech Republic and the founder;
- access of health insurance companies to financing of provided nursing and rehabilitation health care in the facilities with accommodation;
- criteria for setting the amount of payments from the user of a service for accommodation and food in facilities of social services with accommodation, for individual acts for ambulatory field services and for provided social and health services in the health facilities with accommodation (Matoušek, 2011).

The author Průša (2010) is reminding that when assessing efficiency, it is not possible to forget the influence of different standard of facilities with social and health services in the individual regions, which significantly determines the possibilities of optimum satisfaction of the client needs in dependence on their overall social situation. Furthermore, he reminds that the amount of operational costs of individual facilities is in a significant way determined by the age of the buildings and by personal equipment of individual facilities. Attention has to be paid also to the size of individual settlements and main development tendencies, which are applied in development of social services in the European states. Expenses for social services have been for a long time on the rise since 1990s of the twentieth century and this tendency has been caused by several factors. The point was a significant increase of the amount for accommodation and food in the social care institute in the second half of the 1990s, when the increase took place, which was higher than valorisation of pensions. Payments for providing of individual acts of carer service were on the rise. The stable level of state subsidies for a bed in institutional facilities in the course of the whole second half of the 1990s and at the beginning of the 21st century had also its influence. It is also important to mention passing of Act No. 108/2006 Coll. on social services, which principally changed the system of financing social services. Subsidies from state budget are provided to the providers of social services, which are registered in the register of providers, by the Ministry of labour and social matters through the budgets of regions within their transferred competency.

The most important change, which has been brought by the new act on social services is enshrining of a new social benefit through the contribution for care (Šramel, 2016). This contribution represents a new tool of financing of social services, yet it is expected that it will lead to positive and expected changes. Contribution for care is provided only to the persons, who due to the reason of their long time bad health condition need assistance from another natural person, when looking after their own person and with their own self-sufficiency secured. Matoušek (2011) is mentioning the targets of this contribution:

- providing free selection of the manner of providing services and reversibility transition from “passive dependant patient” to the “active patient”;
- unification of conditions for obtaining public funds for all entities providing care under the condition of registration;
- Increase of the element of co-operation of the citizen in solving their social situation;
- cancellation of generalisation of the view to the disabled citizens and old age pensioners;
- to start the process of deinstitutionalization and individualisation of care.

#### 4. Conclusion

Social policy is a system that contains several subsystems - one of which are social services. From legislative point of view, the key framework of the legal form of social services in the Slovak Republic is the Act No. 448/2008 Coll. on social services. In the case of the Czech Republic, such a key legislative amendment is Act No. 108/2006 Coll. on social services.

The advantage of a non-public provider, who draws funds from other sources than the public budget of a city or municipality, or self-governing regions, is that he can also provide the client with extraordinary services. If a client is well-financially situated, it is a non-public provider who can provide him with extraordinary care or otherwise meet his specific requirements. The advantage of public service providers is the ability to provide social services without the goal of generating profits. They primarily focus on satisfying the basic and necessary requirements of clients. The fundamental difference between providers is also their affordability. Generally, a public service provider is able to provide a social service with the involvement of a client, thus overall financial burden of accepting social services is more accessible to the client.

*"Social policy is one of the key areas of public policy interests."* (Mandys, Mojžišová, 2015). Social services represent a sphere, which is going to face big pressures in the context of negative demographic trends in the Slovak and in the Czech Republic. The pressure will go up with increasing demand for social services and with stagnating supply of social services. This challenge will represent a financial burden for public budgets, but at the same time it can represent a space for development of business in social services. Importance and scope on issues will also be reflected upon the fact that it will force attention of persons in charge and shall be an integrated part not only of professional, but also of lay discussion. The success rate depends on the fact, how central governments will be able to react to increasing demand and how their budgets cope with the connected costs. We assume that in the course of increasing demand for social services the significance and scope of participation of the third sector will grow. For further research, it would be advisable to focus attention on Member States of the European Union with a similar demographic trend as in the Czech Republic and Slovak Republic and to find out how these countries cope with demographic crisis in the context of social services and what proposals for systemic changes and preparations in the social assistance system could the Slovak Republic and the Czech Republic apply in practice.

#### References

- [1] Bočáková, O. and Kubíčková, D. (2015). *Úvod do sociálnych služieb (Introduction to social services)*. Brno: Tribun EU.
- [2] Cibáková, V. et al. (2012). *Ekonomika verejného sektora (Public sector economics)*. Bratislava: Iura Edition, spol. s.r.o.
- [3] Dávideková, M. (2014). *Sociálne služby (Social services)*. Trnava: Univerzita sv. Cyrila a Metoda v Trnave, Fakulta sociálnych vied.
- [4] Dohnalová, M. et al. (2012). *Sociální ekonomika, sociální podnikání (Social economics, social business)*. Praha: Wolters Kluwer.
- [5] Halásková, R. and Halásková, M. (2016). Evaluation of selected social services for the elderly in regions of the Czech Republic. In Klímová, V. and Žitek, V. (eds.). *19th International Colloquium on Regional Sciences. Conference Proceedings*. Brno: Masarykova univerzita, pp.497-503. DOI: 10.5817/CZ.MUNI.P210-8273-2016-64.

- [6] Horváth, P. (2013). Sociálny štát (Social state). In Bočáková, O. and Špačková, A. (eds.). *Aktívne a zdravé starnutie – dôstojný život seniorov v 21. storočí (Active and healthy aging - dignified life of seniors in the 21st century)*. Trnava: FSV UCM, pp. 13-26.
- [7] Kiaušienė, I. and Vazonienė, G. (2016). Development of Rural Social Infrastructure Services Promoting Elderly Integration to Society. In Kovářová, E., Melecký, L. and Staničková, M. (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, Faculty of Economics, pp. 434-442. WOS: 000387986300048.
- [8] Lukáč, M. and Hájek, O. (2016). *Teorie regionálního rozvoje (Theory of regional development)*. Zlín: Akademie managementu a ekonomiky.
- [9] Malíková, E. et al. (2007). *Inovácie v sociálnych službách (Innovations in the social services)*. Bratislava: Univerzita Komenského v Bratislave.
- [10] Mandys, J. and Mojžíšová, M. (2015). The issue of data in planning regional social policy. In Klímová, V. and Žítek, V. (eds.). *18th International Colloquium on Regional Sciences. Conference Proceedings*. Brno: Masarykova univerzita, pp. 383-390. DOI: 10.5817/CZ.MUNI.P210-7861-2015-51
- [11] Matoušek, O. et al. (2011). *Sociální služby (Social services)*. Praha: Portál.
- [12] Oláh, M., Iglárová, B. and Bujdová, N. (2013). *Sociálne služby (Social services)*. Bratislava: IRIS – Vydavateľstvo a tlač, s.r.o.
- [13] Průša, L. et al. (2010). *Poskytování sociálních služeb pro seniory a osoby se zdravotním postižením (Provision of social services for seniors and persons with disabilities)*. Praha: VÚPSV.
- [14] Rentková, K., Roštárová, M. and Mazanovský, M. (2016). The analysis of regional disparities in the Slovak republic. In *Proceedings of the 28th International Business Information Management Association Conference - Vision 2020: Innovation Management, Development Sustainability, and Competitive Economic Growth 2016*. p. 2014-2025. Code 126153.
- [15] Šramel, B. (2016). *Orgány ochrany práva a ich miesto vo verejnej správe (Law enforcement authorities and their place in the public administration)*. Trnava: Univerzita sv. Cyrila a Metoda v Trnave.
- [16] Zákon č. 108/2006 Sb. – Zákon o sociálních službách (Act No. 108/2006 Coll. - Social Services Act.).
- [17] Zákon č. 5/2004 Z. z. - Zákon o službách zamestnanosti (Act No. 5/2004 Coll. - Employment Services Act.).
- [18] Zákon č. 448/2008 Z. z – Zákon o sociálnych službách (Act No. 448/2008 Coll. - Social Services Act.).



## **Cohesion Policy from the Perspective of Territorial Self-Government in Slovakia in 2011-2016**

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### **Abstract**

*The aim of the contribution is to analyse the amount of funds earmarked by local and regional self-government from the EU Structural Funds for cohesion policy in 2011-2016. An analysis of the allocation of the funds received covered the two programming periods 2007-2013 and 2014-2020. The analysis is based on official local government documents, individual documents of VÚC, state budgets and state final accounts in the monitored period. The contribution of the presented article analyses the use of euro-funds in Slovakia in the framework of cohesion policy through its important subject - territorial self-government. In addition, we can determine the development tendencies of drawing funds from the structural funds of both local, regional and local self-government in Slovakia in 2011-2016. The less important task of the article is to graphically capture changes in the absolute and relative rate of EU funds absorption by Slovak territorial self-government.*

**Keywords:** EU funds, Slovak republic, territorial self-government

**JEL Classification:** H72, H73, H81

### **1. Introduction**

One of the most widespread ways to analyze cohesion policy and European integration is to analyze the use of funding from individual operational programs (Bachtler and Mendez, 2007). This makes it possible to compare the "success rate" of using EU funds among countries. The second but more demanding approach is to analyze the use of "European money" within individual entities in a specific country. We have leaned on this research approach and decided not to look at basic indicators (eg the amount of EU funds for individual entities). Instead, we have paid attention to one sub-level of public administration – the territorial self-government and its involvement in drawdown of EU funds. This process builds on a general overview of EU funds absorption and contains a detailed analysis of local and regional self-government. European Union funds are a tool for job creation and the creation of a sustainable economy and a good environment. From the point of view of cohesion policy and economic impacts on individual Member States, the role of these financial mechanisms is to mitigate inter-regional disparities. These differences should be wiped out both within countries as well as across the EU (Hájek, Novosák and Horváth, 2017).

Municipalities, cities and regions are the ones most affected by the geographically uneven economic development of the states. Therefore, it is very important to monitor the level of local government participation in drawdown of the Structural Funds. In a more detailed analysis of the EU funds' spending, we can identify, from this point of view, the most important expenditure areas of local government. The specific focus of individual EU funds and national

priorities create a framework that determines the degree of involvement by local government in the use of the Structural Funds (Ezcurra and Pascual, 2008).

The degree of participation of municipalities, cities and regions in the use of EU funds expresses the intensity of involvement of local authorities in the use of these funds. This enables us to identify the priority areas of the individual local government entities as well as the entire local and regional self-governmental level. Representatives of municipalities, cities and regions are better informed about the needs and preferences of local residents (Jilek, 2008), therefore individual financial flows reflect local conditions. Drawdown of EU funds at the level of municipalities, cities or regions tells us, among other things, about the areas that are the most important for the units or levels of local government. Grisorio and Prot (2016) came to a similar conclusion, adding that the amount of funds targeted on different areas by municipalities and regions, is linked to several variables, including European and national priorities, bureaucratic difficulty, the stage of the policy cycle and the programming period phase (beginning-middle-end). These conclusions can be applied to both local and regional self-government (Dąbrowski, 2013).

## **2. Problem Formulation and Methodology**

In 2004, the Slovak Republic joined the EU and started to participate in EU Structural Funds. The eligible entities to which these funds are allocated are Slovak municipalities, towns and higher territorial units (HTUs). HTUs represent a regional self-governing level and from the point of view of the EU funds, are classified as NUTS III. They have a specific status as they are both subjects and objects of EU cohesion policy. Slovak territorial self-government has been able to finance its own projects through EU funds. This way, the flow of EU funds reflects the priorities and needs of individual municipalities, cities and HTUs.

In addition, in the case of Slovak territorial self-government, another determinant is its competency framework and the phase of the programming period. Determining the target area where EU funding is being spent within the individual Slovak cities and the HTUs depends on the division of powers, responsibility and control (Sramel, 2017). In principle, the powers of municipalities, cities and HTUs are generally regulated by law. The individual groups of competencies - the spending areas that municipalities, cities or HTUs finance through their budgets are determined by Act No. 416/2001. According to the Act, municipalities spend on roads, general internal administration, social assistance, spatial planning, nature protection, education, physical culture, theatre, health, regional development and tourism. The HTUs finance from their budgets roads, railways, road transport, civil protection, social assistance, spatial planning, education, physical culture, theatrical and educational activities, libraries, health, human pharmacy, regional development and tourism (Machyniak and Sebik, 2013). By combining the delegated spending power and possibility to finance own projects from EU funds, Slovak municipalities as well as HTUs have been given the opportunity to obtain these financial resources and their utilization according to their own needs and preferences.

### **2.1 Data**

By setting the limits in our research, we have moved to obtain the necessary data. Information and precise data from the local and regional levels are not precisely mentioned, so we have to separately quantify the amount and area of EU funds spent. Documents from 2011-2016 served as sources of data. Specifically, we used the Final Accounts of Higher Territorial Units and Materials from the Ministry of Finance of the Slovak Republic (Implementation Status, List of Beneficiaries). We also drew data from the State Final Accounts of the Slovak Republic

from 2011-2016. Our contribution has been working with data since 2011, because these data were not processed in detail in the State Final Accounts before.

To determine the amount of EU funds for the local and regional levels during 2011-2016, two variables had to be identified. The total amount of current and capital grants that were provided to municipalities and HTUs from all state institutions and bodies and the amount of funding that was provided to municipalities and HTUs directly from the state budget and associated extra-budgetary funds.

The total amount of income of municipalities from all state administration bodies in Slovakia is shown in the respective section of the state final account. This category of revenue includes all funds allocated to municipal budgets from the state budget, extra-budgetary funds, EU funds and others. The total amount of state support for both levels of territorial self-government includes EU funds. They are directed to the budgets of individual ministries and are secondly distributed to cover the projects of individual municipalities, cities or HTUs. If we deduct the amount of all grants and subsidies only from the state budget and extra-budgetary funds from the total amount of revenues of municipalities and HTUs, the difference will be the amount that the municipalities and HTUs received from EU funds in the calendar year. This workflow will allocate municipalities' and HTUs' revenue from EU funds for individual years, from other subsidies and grants from the state budget.

Our research focuses on drawdown of funds for projects of municipalities, cities and HTUs in Slovakia during 2011-2016. An analysis of the allocation of the funds received covers two programming periods 2007-2013 and 2014-2020. However, it should be added that, the Slovak Republic was among the countries with the lowest possible use of European funds in the 2007-13 programming period, so the European Parliament's Committee on Regional Development approved the exception for longer-term spending. The Slovak Republic could use funds from this programming period until 2016, when the new programming period was already running.

### **3. Problem Solution**

Based on the work with budgetary and economic documents of the territorial self-government and the annual reports of the Slovak Republic, we have determined the amount of funds for local and regional self-government from EU funds during 2011-2016. The subsequent total of both amounts represents the amount of funds that the entire Slovak territorial self-government drew down of EU funds for the given year. In addition to absolute values, we have also expressed this amount as a relative quantity. Thanks to the basic statistical procedures and calculations, we have found the relative rate of drawdown of EU funds of local, regional as well as all territorial self-government in Slovakia during 2011-2016 compared to the total amount of EU funds throughout the Slovak Republic. The values given in absolute value as well as the relative rate (the share of EU funds drawn down by the local government and all funds drawn down for the Slovak Republic) from 2011 is captured by Table 1.

Cohesion policy is based on the mitigation of differences among regions in Member States. (Gutan, 2017) In the process of reducing regional disparities, the territorial self-governments are therefore primarily involved. That is the reason why they should be major beneficiaries of the EU Structural Funds.

Slovak local government has received the most EU funding for its projects in 2011. Since then, the total amount of EU funding for municipalities and cities has been decreasing. An exception is the year 2015, when compared with the previous year, the amount of EU funding, which was drawn down by the local government, increased. A similar situation exists in the case of

regional self-government, when the highest absolute value of EU funding was in 2012, and thereafter we recorded a decline. In 2015, it rose slightly (+ € 8 million.), but the following year 2016 we recorded a drop of over 55%.

**Table 1: Drawdown of EU Funds by Self-Government in 2011-2016**

Self-government	2011		2012		2013		2014		2015		2016		Average per year	
	Mil. €	%	Mil. €	%	Mil. €	%	Mil. €	%	Mil. €	%	Mil. €	%	Mil. €	%
<b>Local</b>	463	22.7	371	17.3	296	13.5	192	15.2	419	9.7	153	7.9	<b>315</b>	<b>14.4</b>
<b>Regional</b>	70	3.4	77	3.6	53	2.4	61	4.8	69	1.6	31	1.5	<b>60</b>	<b>2.8</b>
<b>Self-government TOTAL</b>	553	26.1	448	20.9	349	15.9	153	20.0	488	11.3	184	9.4	<b>375</b>	<b>17.2</b>
<b>Slovakia TOTAL</b>	2041	100	2137	100	2185	100	1265	100	4288	100	1947	100	<b>2310</b>	<b>100</b>

Source: author's elaboration

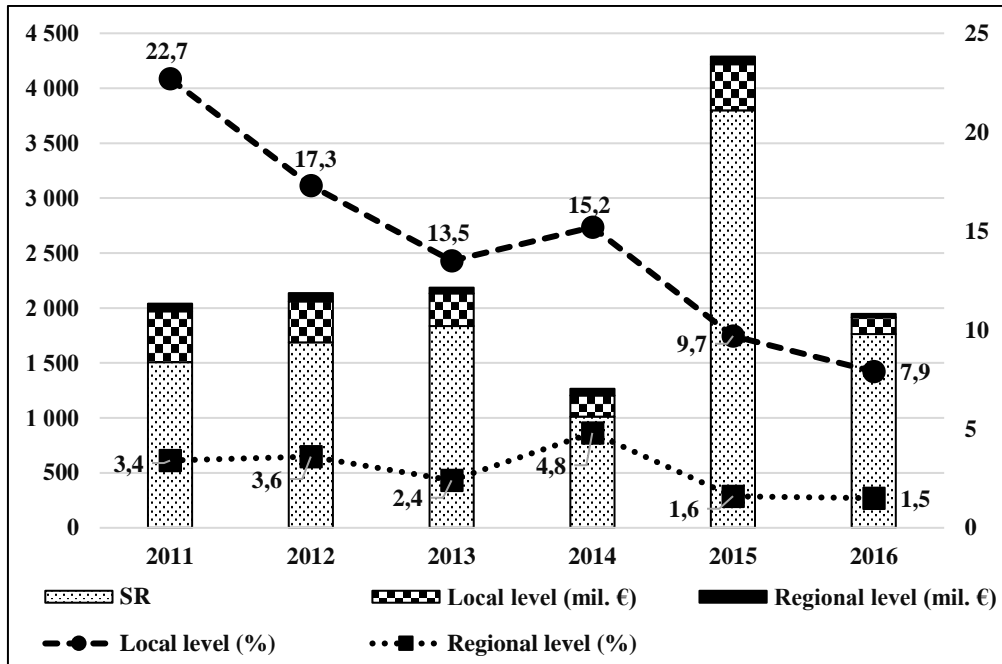
A very interesting finding is that the development tendencies of the territorial self-government when drawing down of EU funds do not reflect the development of drawdown of EU funds for the SR in individual years. If the absolute value of EU funds at the central level was dynamically changing (increasing and decreasing) during 2011-2016, in the case of the Slovak territorial self-government, the amount of EU funding was basically decreasing.

Territorial self-government in Slovakia has been involved in drawing down of EU funds to an increasingly lesser extent. Since 2011, its share in the nationwide drawdown of EU funds has fallen from 26,1% to 9,4%. This fall is quite significant and represents a decrease of almost 2/3 compared to 2011, when the amount of funding used by municipalities, cities and the HTUs was decreased by € 369 mil.

Thus, municipalities, cities and HTUs are still less involved in EU funds from 2011 onwards, and this fact is captured by figure 1. Figure 1 shows the development of the share of local and regional self-government in drawdown of EU funds in comparison with national values. At the same time, it demonstrates what part in € million consists of EU funds drawn down by local and regional self-government.

The share of EU funds has drastically decreased in the case of local self-government. In 2011-2016, the share of cities and municipalities in the nationwide drawdown of EU funds has been reduced by almost two-thirds. In addition, this negative trend is not due to the resulting amount of national drawdown of EU funds, as it was at approximately the same level in 2011 and 2016. At the same time, there was a marked difference in local level participation in drawdown of the Structural Funds, as compared to 2011, the share of local government decreased by 14,8%. In the same period, we have seen a decline in the level of regional self-government involvement in spending more than half of EU funds. The decline in the level of HTUs participation in drawing down of EU funds was not as dramatic as in the case of local self-government.

**Figure 1: The Share of Local and Regional Self-Government in Drawdown of EU Funds in 2011-2016 (€ million and %)**



Source: author’s elaboration

Our analysis of drawdown of EU funds by territorial self-government in Slovakia in 2011-2016 shows that the difference in the participation rate of local and regional levels is diminishing. At the beginning of the 2011 measurement, the difference between the local and regional government spending rate was more than 19%. This inequality has gradually been mitigated, in particular by a sharp drop in the rate of EU funding for local self-government. In the last year of measurement, we noticed that the difference in drawdown was only 6,4%.

#### 4. Conclusion

The aim of the contribution is to analyze the amount of funds earmarked by local and regional authorities from the EU Structural Funds for cohesion policy in 2011-2016. Based on data from available HTUs' materials, aggregate local government data, state budgets and final accounts, we calculated how much municipalities, cities, and HTUs have used in funding from the EU. Subsequently, the basic statistical calculations opened up a window to compare the evolution of absolute and relative values of EU funds used by local government in Slovakia in 2011-2016.

As a result of our work, we find that the local government absorption rate of EU funds has significantly decreased since 2011. At the same time, on the basis of available data, we note that throughout the period the territorial self-government has received much more EU funding than the regional self-government. However, the difference in the share of national drawdown of the EU Structural Funds between local and regional levels is gradually decreasing. The wiping of disproportions is primarily due to a decline in the use of EU funds in the case of local self-government.

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### **References**

- [1] Act. No. 416/2001 on conversion of some competences from authorities of the state administration to communes and higher territorial unit.
- [2] Bachtler, J. and Mendez, C. (2007). Who Governs EU Cohesion Policy? Deconstructing the Reforms of the Structural Funds. *Journal of Common Market Studies*, vol. 45, iss. 3, pp. 535-564.
- [3] Dąbrowski, M. (2013). EU cohesion policy, horizontal partnership and the patterns of sub-national governance: Insights from Central and Eastern Europe. *European Urban and Regional Studies*, vol. 21, iss. 4, pp. 364-383.
- [4] Ezcurra, R. and Pascual, P., (2008). Fiscal Decentralization and Regional Disparities: Evidence from Several European Union Countries. *Environment and Planning A*, vol. 40, iss. 5, pp. 1185-1201.
- [5] Grisorio, M. J. and Prota, F. (2015). The Impact of Fiscal Decentralization on the Composition of Public Expenditure. *Regional Studies*, vol. 40, iss. 12, pp. 1941-1956.
- [6] Guľan, D. (2017). Regional Marketing as a Functional Instrument of Region s Development. In *The Quality of Democracy in the New Political Era: Proceedings of the 4th Academos Conference 2017*. Bologna: Filodiritto, pp. 119-123.
- [7] Hájek, O., Novosák, J. and Horváth, P. (2017). Absorption Capacity of Structural Funds (2007-2013): Typology of Czech Microregions. *Scientific Papers of the University of Pardubice, Series D.*, vol. 24, no. 39, pp. 28-37.
- [8] Jílek, M. (2008). *Fiskální decentralizace, teorie a empirie*. Praha: ASPI – Wolters Kluwer
- [9] Machyniak, J. and Šebík, K. (2013). Obecná samospráva v podmienkach Slovenskej republiky ako (ne)optimálna veľkosť miestnej samosprávy?. *Acta Oeconomica Universitatis Selye*, vol. 2, no. 1, pp. 177-186.
- [10] Melecký, L. and Staničková, M. (2014). Regional Efficiency Evaluation by DEA Approach: Comparison of Selected EU15 and EU13 Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 465–475.
- [11] Šramel, B. (2017). Dozor prokuratúry nad vykonávaním obecnej samosprávy. In *Formy uskutočňovania obecnej samosprávy*. Košice: Univerzita Pavla Jozefa Šafárika v Košiciach, pp. 141-152.

## EU's and China's Approaches to Adapting Mutual Relations to New Global Conditions

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### **Abstract**

*Comprehensive Strategic Partnership means not only an equivalent and mutually beneficial cooperation between partners, but also a joint solution to challenging strategic tasks which arise from due to changing conditions of global, regional and national dimensions. The objective of this paper is neither a deeper characterization of these changes, nor of the new challenges that changes bring for the relationships between the two strategic partners. The aim of this paper is to briefly characterize EU-China Comprehensive Strategic Partnership as a concept reflecting the challenges of a changing world and to show – an example of untapped space for the development of EU-China investment relations and both sides' approach to the problem – the possibility of adapting mutual relations to new conditions in the world.*

**Keywords:** *bilateral relations, China, Comprehensive Strategic Partnership, European Union, foreign investment, International relations*

**JEL Classification:** *F13, F21, F50, F60, F63*

### **1. Introduction**

The tradition of European-Chinese relations had emerged in the 19<sup>th</sup> century, when European countries represented the influence of industrialized countries in China by their presence in local concessions and open ports, and China retained its culture and social essence but did not refuse the material and technical elements of Western modernity, which it regarded as a means of achieving the goal of economic and political strengthening of the country both internally and externally. Since then, the interrelationships and sequences of the different stages of cooperation between European countries and China have gone through a long and challenging way of adapting to the changing conditions of the global, regional and national dimensions.

The European Union (EU) and the People's Republic of China (China) have become key actors around the world in the light of changes in world politics and economy, the emergence and development of the European integration process and the ongoing reforms in China, as well as many other factors. Their traditional contacts have developed since 1975 into bilateral relations that have evolved over time from one-dimensional (trade) to all-dimensional (trade, economic, political, scientific and technical areas), from more-limited (covering a few areas) to wide-ranging (covering an extensive range of areas) and from one-level (interstate) to multi-tiered (local, interstate, supranational) cooperation. Cooperation in new areas, based on the 1985 Agreement on Trade and Economic Cooperation (TECA), has been accompanied by the establishment of joint committees, working groups, expert and sectoral dialogues and meetings, joint institutions and programs, the organization of joint short- and long-term

activities, etc. New instruments of mutual cooperation, especially sectoral agreements, have emerged and the interaction of both parties has been directed towards the Comprehensive Strategic Partnership from the initial fewer or more branched relationships. Analysis of the qualitative changes in the development of EU-China relations was dealt with the first phase of our research (Cihelková and Nguyen, 2016).

The aim of this paper is to briefly characterize EU-China Comprehensive Strategic Partnership as a concept that reflects the challenges of a changing world and to present the EU and Chinese approaches to creating an open, transparent and safer environment for foreign direct investment inflows from one party into the territory of the other party as a case study.

## **2. Comprehensive Strategic Partnership – a Concept that Reflects the Challenges of the Changing World**

Approximately in the mid-1990s, as a result of the massive economic rise of Asia and the growing interest of the EU in Asia (and particularly in China) in the spirit of the “New Asia Strategy” (European Commission, 1994), the relationship between the EU and China changed. Their bilateral dimension was complemented by the Asia-Europe Meeting (ASEM) multilateral approach to the Asian continent. It has also been stressed by the EU on the long-term relationship between China and the usability of European experience of the EU’s rise in the world. Jing Men (2007) said in a context that “China’s changes are attack the EU, and EU’s experience fascinates China. Since 1990s, the mutual attraction of the two sides has brought their bilateral relationship to a new high”. On the basis of the EU’s strategic approach to China and China’s pragmatic approach to the EU, as well as the transformation of the EU and China itself, and deepening and expanding mutual co-operation, the foundations for the development of the EU-China Comprehensive Strategic Partnership have been established.

The emergence of the EU-China Comprehensive Strategic Partnership has made it possible by adopting two Policy Papers: “A Maturing Partnership – Shared Interests and Challenges in EU-China Relations”, which was adopted by the Commission on 10 September 2003, and “China’s EU Policy Paper”, adopted by the Chinese Government on 13 October 2003. The EU and China defined relations as “maturing” and “more strategic”. While the EU’s Policy Paper is based on the Common Foreign and Security Policy of the EU (and is predominantly of an inter-state type), the China’s Policy Paper reflects China’s foreign policy, common interests with the EU but, on the other hand, insists on the application of principles that arise from different historical and cultural backgrounds, the socio-economic system and the level of economic development (“One China”, “One Country, Two Systems”, “respecting China’s sovereignty, interdependence and territorial integrity and non-interference in China’s internal affairs” and alike). While the EU’s Paper has included an evaluation of a new maturity in EU-China relations and updated the EU’s approach to China in helping to drive policy and take EU action over the coming years, China’s Paper is a set of procedures clearly defined by individual areas of mutual cooperation, even though less developed. Based on both Policy Papers, the EU-China Comprehensive Strategic Partnership was endorsed at the 6<sup>th</sup> EU-China Summit held in late October 2003 (Cihelková and Nguyen, 2016).

From the definition that we provided earlier (Cihelková, Nguyen, Woźniaková and Straková, 2017), suggests that Comprehensive Strategic Partnership includes two parallel processes – all-dimensional, wide-ranging and multi-layered cooperation (Comprehensive Partnership) and synergy and sharing of responsibility in strategic issues and issues that rise from bilateral relations in both economic and non-economic areas, but also within their framework (Strategic Partnership). The Strategic Partnership also includes cooperation in third regions (countries,



regions, etc.), where the EU and China share common interests (Central Asia, Africa, Arctic, etc.), and acting in coalitions and alliances (mainly in international organizations) varies according to the nature of the problems under consideration and the interests and benefits that the solution brings to partner countries. In addition, EU-China relations do not only involve conflict-free cooperation but also include areas of cooperation that show disagreements and problems between the two sides, such as human rights, the arms embargo, the fulfillment of WTO conditions and procedures, etc., which have led to controversial views on the formulation of the Strategic Partnership itself.

Just as the scale and scope and quality of bilateral relations between the EU (formerly the European Communities) and China changed, the EU-China Comprehensive Strategic Partnership began to develop and change at the same time. In 2003–2013, it underwent the initial phase of the consolidation of European integration, linked to the EU's preparations for eastern enlargement (2004), and China's shift from a traditional, centrally planned developing country to a reforming, socialist economy of a market type. Its second (current) stage was started ten years later (November 2013) after the adoption of the "EU-China 2020 Strategic Agenda for Cooperation" and continues to date. It was linked to the EU's drive to revitalize the European economy (2008–2009) and the global financial and economic crisis and China's efforts to strengthen its internal and international position, but also to help the economic recovery in Europe through which it wants to build a "partnership for peace, growth, reform and civilisation" and further strengthen the global influence of China-EU relations (Government of China, 2014). Strategic Agenda as a basic document for strengthening mutual relations providing a list of key initiatives which should be achieved by 2020 and beyond. It covers every possible aspect of cooperation in the area of prosperity, sustainable development, people-to-people exchanges and peace and security (EEAS, 2013). The Comprehensive Strategic Partnership between the EU and China has thus gradually included foreign affairs, security issues and international challenges such as global governance.

If the Comprehensive Strategic Partnership is to become a concept for reflecting the challenges of a changing world, it must take into account the very world itself, which has become, through globalization as a dominant tendency, a more interconnected, more dangerous and more complex world. Its considerable degree of interconnection is manifested not only in the economic sphere, i.e. in the interconnection of production; markets for goods, services and investment; increasing transport connectivity; Internet and digital interconnection; the existence of a "democratization paradox", but also in social, political, cultural areas, etc. "While a more connected world", as states Antonio Missiroli (2015), "is full of opportunities, it is also putting the nation state under unprecedented strain. By generating vulnerabilities and fragmented identities, this is giving rise to tensions and, at times, leading to more conflict. It is becoming a more dangerous world". However, the more interconnected world is also the more complex world. On a global scale, new powers are emerging that do not create coherent blocks. While global power is targeted, besides the nation state, on a network of state, non-state, interstate and transnational actors, individual regions represent different configurations of power. Global shift and scattering of power are challenges for traditional world multilateralism.

Developing the conditions in a more interconnected, more dangerous and more complex world, including the changing policy and approach of the United States as a world leader in a range of global issues and uncertainties stemming from Brexit, implies the need to further expand and deepen EU-China Comprehensive Strategic Partnership with greater emphasis on strategic issues. There are many challenges that by grasping and proper usage could bring mutual benefits in terms of driving economic growth, creating jobs and improving levels of social welfare. This is mainly about adapting the bilateral and multilateral framework for the

development of the EU-China trade; taking advantage of the Belt and Road Initiative (BRI) and Investment Plan for Europe (the Juncker's Plan) to develop connectivity in trading, investing, financing, policy and interpersonal relationships among more than 100 countries; coping with the financialisation of the world economy; the creation of innovative links and industrial cooperation to take advantage of the opportunities offered by breakthrough trends in science, technology and innovation; finding a broad agreement on climate change and energy security; strengthening people-to-people transcontinental ties and exchanges, especially in the fields of tourism, education, culture and health. The challenges outlined above represent areas in which the EU and China have the opportunity to deepen their Comprehensive Strategic Partnership, thereby assisting in stable, balanced and sustainable global development.

### **3. Creating an Open, Transparent and Safer Environment for the Flow of Investment Between the EU and China (Case Study)**

One of the primary challenges of the current world, not mentioned in the above list, is the reform of the environment for the inflow of foreign direct investment (FDI) of one party into the territory of the other. If this challenge is reflected through EU-China Comprehensive Strategic Partnership, it will lead to the use of space for a substantial increase in bi-directional investment flows. For the time being, they do not match the economic potential of the EU and China, and are incomparable with the flow of investment between the two major investors in the world – the EU and the US.

#### ***3.1 Unexploited Space to Move FDI and its Causes***

According to Eurostat data (2017), the share of China (including Hong Kong) in total EU FDI stocks in third countries was 4.2% at the end of 2015, i.e. EUR 288 billion, while the same share of the USA amounted to 37.2%, i.e. EUR 2 561 billion. Conversely, China's share (including Hong Kong) in total EU FDI stocks amounted to 2% (EUR 117 billion), while the same share of the USA amounted to 41.7% (EUR 2 436 billion). If we take as a base only the share of mainland China in total EU FDI stocks abroad, we will receive EUR 168 billion, and the share of continental China in total FDI stocks from third countries in the EU, even EUR 35 billion (European Commission, 2017). The United States is therefore a much larger place for the EU FDI, but also an FDI exporter to the EU. However, there is a need to take the development of the FDI share of China to EU FDI and the proportion of EU FDI to EU's aggregate outward FDI. If we compare these relative shares, we will find that China has been around 1.75% of EU FDI in recent years, while the EU has an average of 6% of total Chinese FDI. In the case of the EU, this share has stagnated despite the fact that the stimulus factors have changed – before 2005, the benefits of FDI's move to China have been associated with low local labor costs, low soil and less stringent environmental regulations; after 2005 with the growth of the domestic market; after 2012 with expanding service sectors.

The main reasons preventing proper use of this space is the regulation of accession to the capital market of the other party and also the nature of the main Chinese investors in the EU Member States, which are state-owned enterprises.

European investors are convinced that they are restricted in their approach to the Chinese market. If they are established in this market, they are explicitly or implicitly discriminated against, mainly because of the domestic development strategy and the existing protectionism in some sectors. Also, Chinese companies perceive certain constraints on the European market, especially if they want to invest in high technology. They believe that this is because of unfair competition, but also because of national security concerns. The level of restraint of the

Chinese market and the EU market is demonstrated not only by investors but also by FDI Regulatory Restrictiveness Index (FDI Index), which is compiled and published by the OECD. In 2016, the ten countries with the lowest FDI Index, indicating the openness of the countries, were: Luxembourg, Portugal, Slovenia, Romania, the Czech Republic, the Netherlands, Estonia, Finland, Spain, Germany, whose index was between 0.004 (Luxembourg) and 0.023 (Germany); the United States is above the OECD average of 0.089. On the other hand, ten countries with the highest FDI Index, indicating country closure, were: Tunisia, Malaysia, India, New Zealand, Jordan, Indonesia, China, Myanmar, Saudi Arabia, Philippines (ranging from 0.206 in Tunisia and 0.398 from Philippines). China was 0.327 with the fourth most sophisticated of the monitored countries (OECD, 2017).

Although the FDI Index speaks in favor of considerable restrictions, and hence the closure of the Chinese market, García-Herrero, Kwok, Xiangdong, Summers and Yansheng (2017) argue that “China today is much more open than Japan and South Korea were when they were at similar stages of development.” In other words, the European partners appreciate the shift in the liberalization of important parts of the Chinese economy, especially after the country entered the WTO in 2001 (see, for example, Fojtková, 2012). In the investment area, however, there is a lack of transparency in the environment, industrial policy and non-tariff measures that discriminate against foreign companies; strong government interventions into the economy lead to the dominant position of state-owned enterprises, unequal access to subsidies and financing; there is poor protection and enforcement of intellectual property rights. The Chinese government, on the other hand, wishes to improve the business environment for foreign investors, in line with policies to promote further openness of the Chinese economy. It was proclaimed at the last 19<sup>th</sup> Congress of the China Communist Party held in Beijing on October 18–24, 2017. It is mainly about the timetables for achieving openness in individual sectors, enhancing the protection of intellectual property, creating a national system of work permits for foreign workers in China, improvement of the procedure for obtaining visas, etc.

The main Chinese investors on the territory of the EU Member States are state-owned enterprises (SOEs). In the years 2000–2014 SOEs came from more than two thirds of Chinese FDI (31 out of 46 billion EUR) (García-Herrero, Kwok, Xiangdong, Summers and Yansheng, 2017). These FDIs are linked to the possibility of government subsidies for companies entering the EU markets. This leads the EU countries to fear of unfair competition, but also the possibility of Chinese investment in its territory, not just for economic but also for non-economic reasons, which may be linked to political or security risks. Although since 2016 SOEs are no longer the main players in the Chinese economy, they maintain their decisive position in the financial sector (90.7%), healthcare (89.9%) and culture (86.6%). More than 50% of them participate in education, research, commercial leasing, wholesale and retail, accommodation and construction. The main subject of the Chinese economy today is market-oriented private-owned enterprises (POEs). POEs today dominate in such sectors as real estate (67.8%), manufacturing (61.2%) and hospitality/restaurant (56%). Sectors with the highest shares of wholly foreign-owned enterprises (WFOEs) are: manufacturing (11%), hospitality/restaurant (9%) and commercial leasing (8.4%). Since joining the WTO, China has been supporting reforms of SOEs, along with opening up the country. Thanks to them, it has succeeded in significantly reducing the size of Chinese industrial enterprises since the late 1990s. In 2015, SOEs accounted for 38.8% of the total assets of above-average industrial enterprises whose annual incomes exceeded RMB 20 million. According to estimations of China’s National Bureau of Statistics (cited according to García-Herrero, Kwok, Xiangdong, Summers and Yansheng, 2017) this share is likely to be higher because there are 2/3 SOEs among Chinese listed companies.

### **3.2 The Main Tool to Build a Better Investment Environment for FDI flows**

Fulfilling this challenge in EU-China relations will mean not only reforming the business and investment environment, i.e. creating a more open, transparent and safer environment, but also negotiating an institutional platform to address the differences between the Chinese and EU environments and facilitating further investment in the form of “EU-China Comprehensive Investment Agreement”.

In the area of EU-China investment relations can be assumed (Fojtíková, 2016), in the next decade, FDI flows will increase, although the characteristics of these flows will differ in every direction. The reasons for China’s growth in China’s investments will be the following factors: excessive national savings, insufficient domestic opportunities, increasing availability of investments, relatively lower costs. And then gaining access to markets, brands and technologies, often related to the drive to develop the domestic market. The European investments in China are then motivated mainly by efforts to gain access to expanding local consumption and services. From a systemic point of view, the increase in investment flows will be made possible by reducing the gap between the business environment in China and the EU, including the opening up of the service sector. Reducing differences will be conditional on reconciling the interests of both parties in promoting and protecting FDI while maintaining competition between European and Chinese companies. Motivating factors will also be job creation, support for innovation and global competitiveness. Retarding factors that will limit the possibilities of Chinese companies exporting or investing in the EU will continue to be EU standards in the areas of human rights, intellectual property, environmental protection, welfare, etc.

The EU-China Comprehensive Investment Agreement should become the basic tool for better access to the Chinese and European markets for investors from the other side and to remove the concerns of European investors from Chinese investments in its territory. The negotiation of this agreement considers the EU-China 2020 Strategic Agenda for Cooperation to be the focal point of long-term bilateral relations between China and the EU. The negotiations aim to facilitate investment by both European and Chinese investors by creating investment rights and guaranteeing non-discrimination; improve transparency, licensing and authorization procedures; ensure a high and balanced level of investors and investment protection and guarantee the rules on environmental and labor aspects of FDI (European Commission, 2017). The main objective of this agreement should therefore be to create a fair, stable, transparent and predictable business climate in both China and the EU so that businesses of both sides enjoy equal treatment regardless of their country of origin. This will require both China and the EU to update their development strategies and institutional frameworks, including the adoption of new legislation.

China declares that it will improve foreign investors’ access to the domestic market and create a non-discriminatory competitive environment for SOEs, POEs and WFOEs. As far as restrictions on sectors to which EU and non-EU companies can enter, China has already reduced its number “special” restrictions from 93 (2015) down to 63 (2017) and adopted a “negative list” for foreign investors, according to which foreign investment in China is allowed unless the industry to which it is directed is listed as forbidden or limited. (Previously, the industry has been categorized as banned, limited or permitted.) This list includes not only industries such as the mass media or national shipping but also finance and telecommunications in which the market dominates the SOEs. So SOEs will probably remain a significant feature of Chinese business by 2025. In unrestricted sectors, the government is considering simplifying the investor’s entry procedure – it is likely that the submission or registration of foreign investment projects will be sufficient. The Chinese government intends

to offer so-called pre-investment national treatment to foreign investors, as well as domestic firms, for example to move “from a system of controlling market access beforehand to one in which supervision is exercised after entry”. At the moment, the market-oriented reform of the land and credit management system and the energy resource management system is accelerating so that the market mechanism can play a decisive role in the allocation of resources. By 2020, he intends to complete the reform of the SOEs where he wants to apply modern standards of corporate governance and ensure that they act together with other businesses in line with market rules. From the EU China expects to recognize the changing Chinese companies that have already adopted and continue to adopt the international principles of corporate governance (García-Herrero, Kwok, Xiangdong, Summers and Yansheng, 2017).

The European Union strives for the shortest possible “negative list” of the industry and also for the unification of laws for Chinese and foreign companies. Given the changing conditions of the international environment, it is crucial for the EU to open the service sector and protect intellectual property rights. The policy of the Chinese Government to promote innovation and research, the strengthening of equal treatment of domestic and foreign firms, legal certainty and the protection of intellectual property should be unified. The EU is interested in Chinese initiative “Made in China 2025”, which has become a target for ten high-tech sectors and could lead to more restrictive access to this market and, in the future, to the transfer of intellectual property. The Chinese government, on the other hand, declares that foreign companies have access to the benefits of the initiative, and that the initiative can foster cooperation within the innovation and industrial partnerships of both parties. The EU will also have to examine its own restrictions for Chinese investors, including depoliticization and greater transparency in the review of national security measures. Beyond its two key instruments – competition policy and dispute resolution frameworks – the EU should develop other instruments that would better cope with inward FDI and regulate unfair operations of Chinese SOEs in the EU. On the other hand, such an instrument can raise China’s fears of rising European protectionism (García-Herrero, Kwok, Xiangdong, Summers and Yansheng, 2017).

The effort of both parties should be that EU-China Investment Agreement started to work as soon as possible and created a unified problem-solving platform. A successful negotiation of the agreement will bring benefits not only for regional but global economic growth. Negotiations have already reached agreement on a number of areas (e.g. on non-discrimination, improved regulatory environment for investor protection, labor and environmental rules) but have also opened up a number of issues that need to be addressed – improving market access to the other party or merging Chinese companies on the basis of political decisions. The necessary convergence between EU and China investment treatment and institutional cooperation frameworks leads the EU to promote clauses that guarantee “competitive neutrality”. This means that no business entity will be favored by the nature of its ownership. The Chinese side acknowledges this requirement in principle, however considering that “when enterprises are not just making decisions for commercial objectives, but taking on public service functions, provisions on competitive neutrality should not apply”. Both sides call for an anchor mechanism for resolving investment disputes. It could be either the Investor-State Dispute Settlement according to the pattern of existing Bilateral Investment Treaties (BITs) between EU Member States and China, or the use of a public judicial system to resolve investment disputes according to the pattern of the EU-Canada Comprehensive Economic and Trade Agreement (García-Herrero, Kwok, Xiangdong, Summers and Yansheng, 2017).

#### 4. Conclusion

In Chapter 2, we highlighted the EU-China Comprehensive Strategic Partnership and its core contexts, which are an opportunity to reflect the challenges of the changing world, and in the decade and beyond will be reflected in the European Union and China relations. The EU-China 2020 Strategic Agenda for Cooperation has set the agenda for the development of the Euro-China Partnership. The basic elements of the strategic agenda are both shared and differentiated approaches of both sides in the context of mutual ties, as well as their shared interests and responsibility in global and regional affairs.

One of the key areas in which mutual cooperation should continue to grow and deepen is investment relations and the liberalization of business environments in the EU and China. The basis for this liberalization should be the comprehensive EU-China Investment Agreement, where the negotiations of which began in January 2014. Its objective is “elimination of restrictions for investors to each other’s market. It will provide a simpler and more secure legal framework to investors of both sides by securing predictable long-term access to the EU and Chinese markets respectively and providing for strong protection to investors and their investments” (European Union, 2016). This agreement should replace the 26 existing BITs between the 27 EU Member States and China. The only EU country that does not have a signed BIT is Ireland; Belgium and Luxembourg signed a joint BIT with China.

European Union and China should, in the future, take advantage of all the opportunities in the investment area to bring together the two strategic partners, including cooperation on investment in infrastructure investments in the countries that will host initiative “The Silk Road Economic Belt” and “The 21<sup>st</sup> Century Maritime Silk Road”. There are two BRI initiatives, also as “New Silk Road” or “One Belt, One Road” (OBOR). Investment relations have thus become an element of Chinese vision, seeking national revival and building a prosperous society in a wide range of economic, social, cultural and political areas. These visions also include a plan for China to become a fully-developed country by 2049. The EU supports this vision and is helping to make the Chinese economy a sustainable way. At the same time, it will strive to bring the EU and China’s interests closer so that it will form the basis for the economic and geopolitical aspirations not only of China but also of the European Union.

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#### References

- [1] Cihelková, E. and Nguyen, P. H. (2016). Qualitative Changes in the Development of the EU-China Relationships: From one-dimensional, more-limited and one-level cooperation to the all-dimensional, wide-ranging and multi-tiered Strategic Partnership. *European Studies. The Review of European Law, Economics and Politics*, vol. 3, pp. 15–49.
- [2] Cihelková, E., Nguyen, P. H., Woźniaková, M. and Straková, R. (2017). The EU-China Comprehensive Strategic Partnership in Context of EU General Concept of the “Strategic Partnership”. *Journal of Security and Sustainability Issues*, vol. 6, nu. 4, pp. 729–744.

- [3] EEAS (2013). *EU-China 2020 Strategic Agenda for Cooperation* [online]. Delegation of the European Union to China, 23/11/2013. [cit.2018-01-22]. Available at: [http://eeas.europa.eu/archives/docs/china/docs/eu-china\\_2020\\_strategic\\_agenda\\_en.pdf](http://eeas.europa.eu/archives/docs/china/docs/eu-china_2020_strategic_agenda_en.pdf).
- [4] European Commission (1994). *Towards a New Asia Strategy*. Communication from the Commission to the Council. Brussels, 13 July 1994. COM(94) 314 final.
- [5] European Commission (1998). *Building a Comprehensive Partnership with China*. Communication from the Commission. Brussels, 25 March 1998. COM(1998) 181 final.
- [6] European Commission (2017). *Trade: Countries and Regions. China*. Directorate-General for Trade. [cit.2017-11-12]. Available at: [http://trade.ec.europa.eu/doclib/docs/2012/march/tradoc\\_149251.pdf](http://trade.ec.europa.eu/doclib/docs/2012/march/tradoc_149251.pdf).
- [7] European Union (2016). Overview of FTA and other trade negotiations. Updated October 2016 [online]. [cit.2018-01-22]. Available at: [http://trade.ec.europa.eu/doclib/docs/2006/december/tradoc\\_118238.pdf](http://trade.ec.europa.eu/doclib/docs/2006/december/tradoc_118238.pdf).
- [8] Eurostat (2017). *The EU continues to be a net investor in the rest of the world*. Eurostat News Release [online]. 12 January 2017. [cit.2017-11-12]. Available at: <http://ec.europa.eu/eurostat/documents/>.
- [9] Fojtíková, L. (2012). China's External Trade after Its Entrance into the WTO with the Impact on the EU. In *International Conference on European Integration 2012*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 56–65.
- [10] Fojtíková, L. (2016). China-EU Investment Relations: Towards a New Institutional Framework. In *Proceedings of the 14<sup>th</sup> International Scientific Conference on Economic Policy in the European Union Member Countries*. Opava: Silesian University, pp. 144–155.
- [11] García-Herrero, A., Kwok, K. C., Xiangdong, L., Summers, T. and Yansheng, Z. (2017). *EU-China Economic Relations to 2025. Building a Common Future*. A Joint Report by Bruegel, Chatham House, China Center for International Economic Exchanges and the Chinese University of Hong Kong. September 2017. London: The Royal Institute of International Affairs, Chatham House.
- [12] Government of China (2014). *China's Policy Paper on the EU: Deepen the China-EU Comprehensive Strategic Partnership for Mutual Benefit and Win-Win Cooperation* [online]. Beijing: Ministry of Foreign Affairs of the People's Republic of China, April 2014. [cit.2018-01-22]. Available at: [http://www.fmprc.gov.cn/mfa\\_eng/wjdt\\_665385/wjzcs/t1143406.shtml](http://www.fmprc.gov.cn/mfa_eng/wjdt_665385/wjzcs/t1143406.shtml).
- [13] Men, Jing (2007). The EU-China Strategic Partnership: Achievements and Challenges. *Policy Paper No 12*, November 2007. Pittsburgh: European Union Center of Excellence – European Studies Center University of Pittsburgh.
- [14] Missiroli, A. ed. (2015). *Towards an EU Global Strategy. Background, process, references*. Paris: European Union Institute for Security Studies.
- [15] OECD (2017). *Regulatory Restrictiveness Index*. OECD.stat. [online]. [cit.2017-09-22]. Available at: <http://www.oecd.org/investment/fdiindex.htm>.

## Public Sector Innovation in the European Union

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### **Abstract**

*One of the key factors of competitiveness of enterprises is innovation. In response to quickly changing customer preferences, companies modify their market offer and deliver new or improved products or services. The importance of innovation has also increased in the public sector recently. On the one hand, this is caused by introduction of management methods characteristic for enterprises into the public sphere and, on the other hand, from the growing demands of citizens. This results in the implementation of various types of new solutions, in the field of administration, customer service, transport and waste management. As a consequence, the public sector assessment can be made according to criteria known from business management such as efficiency, rationality and cost-effectiveness.*

*The objective of this article is to systematize the definitions and types of public sector innovation and to outline their meaning in social life. It also reviews the research conducted on innovation in the public sector at the level of the European Union countries.*

**Keywords:** European Union, innovation, public sector

**JEL Classification:** H41, H75, O31, O38

### **1. Introduction**

The growing importance of innovation in the public sector is related to the change in the bureaucratic administration paradigm towards the 'New Public Management' model. The new approach is based on the use of market mechanisms in public management. These mechanisms include performance evaluation instruments, customer focus and innovation. This means that techniques and methods known from business operations are increasingly used in public management. Another novelty is the openness to stakeholders. An open government is characterized by transparency of its activities, accessibility of services and participation of citizens in making public decisions (Jäppinen, 2011, p. 158). This reorientation of the public sector is aimed at increasing the efficiency of operations and optimizing costs.

In recent years, the role of innovation in the public sector has been on the increase. This is connected with a number of challenges, out of which the most serious one is the aging process of societies, which, on the one hand, causes a decrease in the group of taxpayers, and, on the other hand, an increase in pressure on the quality and scope of medical services provided. In addition, there is still a growing demand for public services, especially in large cities. As a result of the increase in city congestion, solutions are needed that will enable sustainable economic growth and social well-being. Municipal authorities face the necessity of guaranteeing an adequate level of living conditions for their citizens. One of the possibilities is to implement various types of new solutions, for instance, in the fields of administration,



stakeholder services, transport and waste management. An additional reason for introducing improvements in public activities is the possibility of limiting current budget expenditures and reducing the negative impact on the natural environment. The smart city concept and the use of information and communication technologies (ICT) are gaining in popularity. These technologies are becoming more and more ubiquitous and integrated with urban spaces (Gath-Morad et al., 2017, p. 190). Nevertheless, a smart city should not resist the dominance of ICT (Husár et al., 2017). Many urban problems are not related to technological aspects only. Therefore, it is important to take into account social initiative and human potential, too.

The objective of the article is to present the idea of innovation in the public sector, its meaning and typology. In addition, an analysis of available research in the field of public innovation at the level of the European Union countries was carried out. The reports and analyses prepared by the European Commission, OECD, and some research teams from various parts of Europe were used for this purpose.

The first section of the article includes the introduction, an overview of definitions of public innovations, a description of their significance for the functioning of the public sector and citizens, and the functional division of innovations. The second section contains an overview of research carried out in the field of public sector innovation in the European Union. The most important findings are discussed in the final section.

## **2. Public Sector Innovation – Meaning, Definition and Typology**

Innovations are naturally associated with economic activity and with J. Schumpeter who incorporated them into economic sciences (Schumpeter, 1961). He claimed that creative destruction through innovation causes the collapse of some economic structures and the emergence of new ones. Innovations have the shape of a wave that appears from time to time and sets trends in the development of specific industries. Innovations are usually associated with the introduction of a new product, service, or process, finding new markets or modifications to which particular elements of the business are subjected. They can also be associated with the introduction of a new or significantly improved product (a good or service) or process, a new marketing or organizational method to be applied throughout a company, workplace organization or external relations (OECD, 2005, p. 46).

Over time, innovations have begun to be analysed in a wider context that goes well beyond business. It was noticed that in order to gain a higher effectiveness of the innovation process, it is necessary to network cooperation of private and public entities within a given territory (Moulaert, Sekia, 2003; Simmie, 1997; Maillat, 1995). The next trend was the transfer of competences to the regional level. Spatial proximity allows regions to create a competitive advantage based on tacit knowledge sharing, mutual formal and informal linkage of players and networking (Klímová, Žítek, 2012, p. 118). An institutional system involved in the initiation and diffusion of innovation should seek new ideas and inventions and commercialize them to obtain added value for the region and the country. In this way regional and national innovation systems are created. Regular cooperation that is coordinated by public authorities may positively influence economic and social development (Cooke, 2004; Edquist, 1997; Howells, 1999).

Today, innovations are widely used also in the public sector. This is connected with a new orientation of management directed at social effects - security, social responsibility, and creation of society (Raipa, 2012, p. 718-719). Therefore, the determinants of the innovation process, apart from economic values such as, for instance, efficiency and finance, should also contain social goals.

Innovation in the public sector means a new or significant modified process or approach that is innovative in nature and is aimed at better public performance, i.e. higher efficiency, effectiveness and greater satisfaction of citizens and public employees (OECD [online], 2018). When analysing public innovations at a greater degree of generality, they can be considered as a new activity undertaken in the social sphere. In this sense 'Innovation is a social entity's implementation and performance of a new specific form or repertoire of social action that is implemented deliberately by the entity in the context of the objectives and functionalities of the entity's activities' (Koch, Hauknes, 2005, p. 9). The novelty in this definition refers to a specific position in public administration. This means that if a public official uses a new method in his work that improves the provision of services, then we can speak of an innovation. It does not matter that such an improvement is applied outside the public sphere. What is most significant here is its being new in this particular activity.

Several types of innovations can be distinguished in the public sector. These are as follows (De Vries et al., 2016, p. 153):

1. Process innovation – improving the quality and efficiency of internal and external processes,
2. Administrative process innovation – creation of new organizational forms, implementation of new management methods and techniques, new working methods. An example of this is the establishment of a customer service office, where in the same place one is offered a complex public service,
3. Technological process innovation – technological process innovation - creation or use of new technologies introduced in the organization to improve the efficiency of service provision, e.g. computer calculation of taxes,
4. Product or service innovation – creating new products or services, e.g., introducing an allowance for young unemployed who are unable to work,
5. Governance innovation – development of new forms and processes related to specific social problems,
6. Conceptual innovation – implementation of new concepts, reference frames or new paradigms that will enable solving specific problems.

Among the many divisions described in the literature, one can also come across the following innovation classifications (Halvorsen et al., 2005, p. 5-6):

1. Incremental innovations - radical innovations - referring to the degree of novelty,
2. Top-down innovations - bottom-up innovations - refer to the entity that initiated the innovation, 'the top' - means organizations, positions at the top of the hierarchy, 'the bottom' refers to lower-level employees in the public sector, public officials, mid-level politicians and users of innovation,
3. Needs-led innovations and efficiency-led innovation - denoting whether the innovation process has been initiated to solve a specific problem or in order to make already existing products, services or procedures more efficient.

One of the examples of the bottom-up approach are the so-called collaborative innovations. They consist in involving users of innovation and citizens in the process of creating new solutions (Langergaard, 2015, p. 47). This is a reflection of the demand-driven approach to innovation based on social inclusion. Innovation users complement the three remaining spheres that cooperate with each other, i.e. public, academic, and industrial, thus creating the

so-called quadruple helix (Arnkil et al., 2010; Lew et al., 2018). The role of innovation users in the whole process may vary depending on the type of innovation and the stage of involvement. Nevertheless, the contribution of citizens to the development of new ideas and solutions is essential for a comprehensive understanding of needs and better matching to users. It is related to the fact that innovation is a multidimensional, complex and potentially chaotic process. Therefore, it requires a broad inclusion of actors who combine certain problems and solutions in the following successive stages (Torfing, 2016, p. 32-34):

1. Defining problems and challenges,
2. Generating new and creative ideas,
3. Selecting the most promising ideas,
4. Implementing new solutions in practice,
5. Diffusing new ideas and practices.

Innovations are usually related to a specific invention. Thus, if this invention can be converted into a value for the user, then it becomes an innovation. However, this is not always the case. There are certain innovations that do not require an original invention. This is the case when innovations within processes and services employ well-known techniques and technologies (Matei, Bujac, 2016, p. 763). The explanation for this can be that an innovation is not closely related to a new invention but to the already existing one. However, this does not change the fact that an innovation comes into being and that it has signs of novelty but only on the scale of the organization. However, to create an innovation it is indispensable to understand creativity as a mental process that leads to the development of ideas and concepts that become useful.

### **3. Review of Research on Public Sector Innovation**

Innovation in enterprises is the subject of frequent analyses and comparative research. However, in the public sphere there is a large deficit in this area. Although there is research based on surveys and data derived from statistical offices, it is not cyclical and does not allow comparisons between countries over a longer period of time. This part of the article contains an overview of the most significant research in the field of public sector innovation at the level of the European Union countries.

One of the key planning documents of the European Union is the Europe 2020 strategy. It is based on an initiative coordinated by the European Commission under the name of Innovation Union. It contains a number of postulates aimed at improving national innovation systems, including the need to include the public sector in the innovation cycle (Europe 2020, 2010, p. 9). The intention of the European Commission is to involve citizens on a large scale at the public level and stimulate social innovation (Kordoš, 2014, p. 339). A pilot study on innovation in the public sector initiated in 2012 by the European Public Sector Innovation Scoreboard (EPSIS) was intended to function as an auxiliary tool in this initiative. The intention of these activities was to create an instrument that would allow cyclical comparisons of the innovation performance of the public sphere between EU countries. The point of reference was to be the research which had already been carried out on innovation in countries (the Innovation Union Scoreboard) and regions (the Regional Innovation Scoreboard). Public sector analysis includes seven dimensions of innovation described by 22 indicators derived from the Eurostat, OECD, World Bank, World Economic Forum databases as well as from the results of Innobarometer surveys carried out in 2010 and 2011. In 2010, surveys were carried out among over 4,000

organizations operating in public administration. It turned out that about 90 % of them had implemented at least one innovation in the period of three years preceding the survey. The most important barriers with regard to innovation were the lack of human and financial resources, the existing legal requirements and the deficit of support and incentive systems for employees. Public innovations had a positive impact on improving users' access to information, their satisfaction and faster delivery of services. In turn, the 2011 survey concerned the opinion of over 10,000 entrepreneurs on the perception of the impact of improved services and public innovation on the results of the private sector. In those countries where innovative public services were offered together with a business-friendly environment, enterprises were more inclined to implement new business solutions. Thus, public innovation also translated into the innovation of the economic sphere. Unfortunately, the EPSIS study failed to obtain all necessary data and organize countries according to the degree of innovation. Nevertheless, we should look upon it as an important step forward, which sheds new light on the unrecognized aspect of public administration.

Another example of research done on public sector innovation is the analysis of the Nordic countries, i.e. Denmark, Finland, Iceland, Norway and Sweden carried out in 2008-2011 (The MEPIN project). The survey covered 2012 institutions at central (ministries and governmental agencies), regional, and local (municipalities, schools, hospitals) levels. The high level of innovativeness of the Nordic countries in the Innovation Union Scoreboard was also confirmed in their public sectors. The ranking also included two non-EU countries - Iceland and Norway. In 2008-2009, at least one product innovation was introduced by the institutions surveyed – the percentage ranged from 38.2 % (in Sweden) up to 72 % (in Iceland and Denmark) (see Table 1). Even higher rates were achieved in the field of process innovation (from 50 % in Iceland up to 72.3 % in Norway) and organizational innovation (from 50 % in Sweden up to 91.2 % in Iceland). An interesting case was communication innovation understood as ‘the implementation of a new method of promoting the organization or its services and goods, or new methods to influence the behavior of individuals or others (Bloch, 2011, p. 14). This rarely described type of innovation was implemented in the range from 30.9 % of institutions in Finland up to 88 % in Iceland.

**Table 1: Selected Results of the Research Carried Out on Public Sector Innovation in the Nordic Countries, in %**

	Denmark		Finland		Iceland		Norway		Sweden	
	Central government	Other	Central government	Other	Central government	Other	Central government	Other	Central government	Other
<b>Innovations</b>										
Product innovation	71.6	72.0	51.9	56.7	72.0	70.6	61.4	50.9	38.2	45.8
Process innovation	71.6	72.0	57.7	66.0	60.0	50.0	72.3	59.4	65.5	58.0
Organisational innovation	61.4	69.0	57.7	63.9	80.0	91.2	60.8	62.4	50.0	59.3
Communication innovation	60.2	66.1	40.4	30.9	88.0	85.3	52.5	35.2	40.7	49.6

Source: Bloch, Bugge, 2013, p. 140

It is worth noting that the surveyed institutions most frequently pointed to the business sector as their partners in implementing innovation. This concerned mainly the central government. It was related to the fact that in most cases public institutions purchased results of R&D works

or consultancy services from enterprises. However, it was not a passive purchase but an effective cooperation resulting in a useful innovation. The goal of implemented innovations was usually to increase efficiency and improve the quality of services and user satisfaction. Interesting is the fact that social challenges obtained relatively few indications. It is worth emphasising that legal regulations may also be the premise for introducing changes. In the examined countries, with the exception of Finland, about 40 % of the institutions confirmed that they implemented innovations due to the need to adapt to legal requirements.

The NESTA pilot survey is another example of research carried out on public sector innovation (Hughes et al., 2011). The survey covered 64 health organizations and 111 local governments in the UK. The study was carried out in 2010. The results confirmed the high innovativeness of British institutions - around 90 % of respondents indicated that in the previous 3 years they had implemented a novel service or a greatly improved service.

Another report on European public sector innovation is 'Trends and Challenges in Public Sector Innovation in Europe' prepared by Technopolis Group (León et al., 2012). The report is based on country reports produced by the Trend Chart country correspondents performing selected interviews with public officials and academics from 25 Member States (i.e. EU27 with the exception of Cyprus and Luxembourg). It contains the outcome of the research done on the perception of innovation in the public sector, factors and barriers, potential for future innovations and a catalogue of good practices. However, it does not contain quantitative analysis and is not a basis for comparing the results of the level of innovation in the EU. It is rather a compendium of knowledge about understanding of and approach to innovation.

An interesting study on the role of innovation in improving the efficiency and effectiveness of local/regional policy development was carried out by the Fund for Applied and Communication Research based in Sofia (Bulgaria) as part of the Complex Challenges - Innovative Cities (CCIC) project, financed under the EU INTERREG IVC programme (Innovation in the Public Sector, 2013). This study was based on an online survey (859 respondents) and direct in-depth interviews (90 respondents). It was performed in 2010 among representatives of local and regional authorities and, to a lesser extent, ministries, universities and other public and non-governmental institutions. Respondents came from 10 EU countries: Poland, Romania, Spain, Sweden, UK, Bulgaria, Estonia, Finland, Italy, and the Netherlands. The outcome of the research was presented collectively without breaking it down by the organization's country of origin. It turned out that the basic factor in the creation of innovation was the increase in the cost effectiveness of the services provided and the improvement of their coverage and availability. The benefits of innovation included improving relations between citizens and the public sector. It was also important to strengthen the communication channels by means of which the authorities received feedback on the needs and expectations of citizens. Among the causative forces of innovative activity, respondents most often indicated organizational culture, leadership, political will, and political support for change.

#### **4. Conclusion**

For several decades the public sector has been implementing operational methods and techniques taken from business practice. The changes include not only management methods, but also a greater focus on the client (citizen), cost effectiveness and the quality of services provided. This resulted in the increased interest in innovation in most areas of public activity. They may concern more advanced forms such as, for example, implementing ICT in e-government, but they can also involve minor organizational improvements, such as setting up a customer service office where many official matters can be dealt with in one place. The range of innovation is therefore very large. There are many new opportunities, especially in the area

of smart city management, where innovations are necessary to counteract the negative effects of urban population growth.

One of the basic problems for theoreticians and practitioners involved in public management is the deficit of extensive research and analysis that would allow monitoring the progress of individual European Union countries made with regard to increasing the level of public innovation. Although the available research on the Nordic countries, the UK or selected EU countries confirms the high level of innovation in the public sphere and provides abundant information about its stimulants and barriers, these analyses are losing their relevance as most of the data used comes from the 2008-2012 time period. Moreover, there are no studies that would rank EU countries according to the synthetic indicators (the Innovation Union Scoreboard and the Regional Innovation Scoreboard). Although a pilot study was initiated by the European Commission in 2010, it contains a number of statistical data gaps, which makes it impossible to create a reliable ranking of countries. In addition, it was intended to be cyclical, but no further analyses have been published so far.

Therefore, the postulate regarding the necessity to continue research on public sector innovation in the European Union remains valid. The lack of an instrument to monitor changes significantly hinders the debate on the implementation of the Europe 2020 strategy. The strategy postulates an increase in the involvement of the public sphere in initiating and implementing new solutions aimed at improving the quality of life of citizens.

## References

- [1] Arnkil, R., Järvensivu, A., Koski, P., Piirainen, T. (2010). *Exploring Quadruple Helix. Outlining User-Oriented Innovation Models*. Tampere: University of Tampere. Working Papers No 85.
- [2] Bloch, C. (2011). *Measuring Public Innovation in the Nordic Countries (MEPIN)*. Nordic Innovation [online]. [cit.2018-01-21]. Available at: <http://www.nordicinnovation.org/Publications/measuring-public-innovation-in-the-nordic-countries-mepin/>.
- [3] Bloch, C., Bugge, M. M. (2013). Public Sector Innovation—From Theory to Measurement. *Structural Change and Economic Dynamics*, vol. 27, pp. 133-145.
- [4] Cooke, P. (2004). Regional Innovation Systems – an Evolutionary Approach. In Cooke, P., Heidenreich, M., Braczyk H.-J. (eds.). *Regional Innovation Systems. The Role of Governance in a Globalized World*. London, New York: Routledge, pp. 1-18.
- [5] De Vries, H., Bekkers, V., Tummers, L. (2016). Innovation In the Public Sector: A Systematic Review and Future Research Agenda. *Public Administration*, vol. 94, no. 1, pp. 146-166.
- [6] Edquist, C. (ed.). (1997). *Systems of Innovation. technologies, Institutions and Organizations*. London, Washington: F. Pinter.
- [7] *Europe 2020. Flagship Initiative. Innovation Union*. (2010). Luxembourg: European Commission.
- [8] Gath-Morad, M., Schaumann, D., Zinger, E., Plaut, P. O., Kalay, Y. E. (2017). How Smart is the Smart City? Assessing the Impact of ICT on Cities. In Namazi-Rad, M. R., Padgham, L., Perez, P., Nagel, K., Bazzan, A. (eds.). *Agent Based Modelling of*

- Urban Systems*. ABMUS 2016. Lecture Notes in Computer Science, vol. 10051. Springer, Cham, pp.189-207.
- [9] Halvorsen, T., Hauknes, J., Miles, I., Røste, R. (2005). *On the Differences Between Public and Private Sector Innovation*. *Publin Report No. D9* [online]. [cit.2018-01-21]. Available at: <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan046809.pdf>.
- [10] Howells, J. (1999). Regional System of Innovation? In Archibugi, D., Howells, J., Michie, J. (eds.). *Innovation Policy in a Global Economy*. Cambridge: Cambridge University Press, pp. 67-93.
- [11] Hughes, A., Moore, K., Kataria, N. (2011). *Innovation in Public Sector Organisations. A Pilot Survey for Measuring Innovation Across the Public Sector*, NESTA [online]. [cit.2018-01-25]. Available at: <https://www.nesta.org.uk/publications/innovation-public-sector-organisations>.
- [12] Husár, M., Ondřejčička, V., Variš, S. C. (2017). Smart Cities and the Idea of Smartness in Urban Development – A Critical Review. In IOP Conference Series: *Materials Science and Engineering*, vol. 245.
- [13] *Innovation in the Public Sector. State-of-the-Art Report*. (2013) [online]. [cit.2018-01-21]. Available at: <http://www.ccic-project.eu/wp-content/uploads/2013/10/CCIC-State-of-the-art-report-SotAreport.pdf>.
- [14] Jäppinen, T. (2011). New User-driven Innovation Policy: The Key to Finnish Local Government Service Reform. In Anttiroiko, A. -V., Bailey, S. J., Valkama, P. (eds.). *Innovations in Public Governance*. Amsterdam: IOS Press, pp. 158-173.
- [15] Klímová, V., Žítek, V. (2012). Selected Aspects of the Innovation Environment in the South Moravian and the Moravian-Silesian Regions. In *Proceedings of the 1st International Conference on European Integration 2012*. Ostrava: Technical University of Ostrava, pp. 117-130.
- [16] Koch, P., Hauknes, J. (2005). *On Innovation in the Public Sector – Today and Beyond*, *Publin Report No. D20* [online]. [cit.2018-01-21]. Available at: <http://www.aviana.com/step/publin/reports/d20-innovation.pdf>.
- [17] Kordoš, M. (2014). Role of Innovations in the EU Industrial Policy and Competitiveness Enhancement. In *Proceedings of the 2st International Conference on European Integration 2014*. Ostrava: Technical University of Ostrava, pp. 335-342.
- [18] Langergaard, L. L. (2015). Perspectives on User-Driven Innovation in Public Sector Services. In Agger, A., Damgaard, B., Hagedorn Krogh, A., Sørensen, E. (eds.). *Collaborative Governance and Public Innovation in Northern Europe*, Sharjah: Bentham Science Publishers, pp. 47-67.
- [19] León, L. R., Simmonds, P., Roman, L. (2012). *Trends and Challenges in Public Sector Innovation in Europe* [online]. [cit.2018-01-24]. Available at: [https://www.technopolis-group.com/wp-content/uploads/2014/06/1447\\_INNOERATREND-2011-12.pdf](https://www.technopolis-group.com/wp-content/uploads/2014/06/1447_INNOERATREND-2011-12.pdf).
- [20] Lew, Y. K., Khan, Z., Cozzio, S. (2018). Gravitating toward the quadruple helix: international connections for the enhancement of a regional innovation system in Northeast Italy. *R&D Management*, vol. 48, iss. 1, 2018, pp. 44-59.

- [21] Maillat, D. (1995). Territorial Dynamic, Innovative Milieu and Regional Policy. *Entrepreneurship & Regional Development*, vol. 7, no. 2, pp. 157-165.
- [22] Matei, A., Bujac, R. (2015). Innovation and Public Reform. In *Procedia Economics and Finance*, vol. 39, 3rd Global Conference on Business, Economics, Management and Tourism, 26-28 November 2015, Rome, Italy, pp. 761-768.
- [23] Moulart, F., Sekia, F. (2003). Territorial Innovation Models: A critical Survey. *Regional Studies*, vol. 37, no. 3, pp. 289-302.
- [24] OECD (2005). *Guidelines For Collecting and Interpreting Innovation Data, Third Edition* [online]. [cit.2018-01-20]. Available at: [http://www.oecd-ilibrary.org/science-and-technology/oslo-manual\\_9789264013100-en](http://www.oecd-ilibrary.org/science-and-technology/oslo-manual_9789264013100-en).
- [25] OECD [online]. [cit.2018-01-22]. Available at: <https://www.oecd.org/governance/observatory-public-sector-innovation/library/DEFINITION%20OF%20TERMS.pdf>.
- [26] Raipa, A. (2012). Innovations In New Public Governance: Methodological Aspect. In *7th International Scientific Conference „Business and Management 2012”*. Vilnius: Vilnius Gediminas Technical University Press „Technika”, pp. 717-724.
- [27] Schumpeter, J. (1961). *The Theory of Economic Development: an Inquiry Into Profits, Capital, Credit, Interest, and the Business Cycle*. New York: Oxford University Press.
- [28] Simmie, J. (ed.). (1997). *Innovation, Networks and Learning Regions*. London: Regional Studies Association.
- [29] Torfing, J. (2016). *Collaborative Innovation in the Public Sector*. Washington: Georgetown University Press.



## Analysis of Initiatives to Support Scaleups as Tool to Enhance EU's Competitiveness

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### Abstract

*The paper analyzes the initiatives of European Union to support the development of scale-ups. Nowadays, a scale-ups are considered to be one of the most dynamic economic development tools and therefore the main goal of the article is to analyze how scale-ups are supported by EU. A secondary goal of the paper is to identify most successful European scale-ups and define their impact on the economic development processes and competitiveness of the European Union. The authors of the paper are based on the assumption that scale-ups and innovations associated with them are also an important tool for regional development. At the same time, their scalability and transnational character represent an opportunity for the economic development of European countries that cooperate within their platforms. The dominant research method is an analytical method. In research was also used a questionnaire filled in by selected scale-ups, to map their perception of the EU's mechanisms and tools to support their growth.*

**Keywords:** competitiveness, economic development, European Union, innovations, scale-ups

**JEL Classification:** O31, O38, O44, Z00

### 1. Introduction

*"Innovations are considered to be the main driver of economic development of states and regions. Innovation policy is evolving in all developed countries and it is clear that this policy is going to play a crucial role in the future efforts for European integration and joint development of European states"* (Fránková, 2016, p. 244). Probably the most important subjects, producing innovations are High Growth Firms, or so-called scaleups. There are many definitions of scaleups, but we have chosen the following one by OECD: "A 'scale-up company' is one that is growing its sales or employee numbers by 20% per annum over a three-year period, and which started that period of growth with at least ten employees" (Gaskel, 2016, p. 4). Scaleup can also be described as a "grown" startup. The main difference between startup and scaleup is that startup represents the earlier stage of business development. A startup company valued at over \$1 billion is named unicorn. Scaleups have a great potential to deliver hundreds of thousands additional jobs and billions of dollars towards European Union's (EU) GDP. It also has a potential for higher growth in European productivity through competition, to knock-on opportunities for firms in the EU's supply-chain and make an impact across all sectors of the EU's economy (Deloitte, 2014). In this paper, we decided to analyse EU's tools and activities for supporting scaleup companies in development and growth and also to provide a short insight into few chosen scaleups with a great potential to become new

European startup unicorns. In the final part of the work, we tried to compare EU and US startup ecosystems in numbers and perception of scaleup companies.

## 2. Initiatives of European Union to Support Scaleups

EU officials and economic experts do realise that scaleups can be one of the most important tools for economic growth. Strengthening and developing a favourable ecosystem for startups and scaleups was also one of the main priorities of the Maltese Presidency to the Council of the EU (Mintoff, 2017). EU's initiatives aiming to support scaleups can be divided into two main groups. The first group consists of strategies trying to boost economy and competitiveness of EU via building an effective and functioning single market. We decided to mention mainly initiatives to strengthen The Single Market of the European Union (SM EU) and also The Digital Single Market of the European Union (DSM EU). The second initiative group is trying to directly create a better environment for scaleups and also startups. We decided to include in this group Startup Europe Partnership (SEP), Scaleup Manifesto and Europe's next leaders: the Start-up and Scale-up Initiative.

Functioning SM EU can be nowadays considered to be one of the most significant trading powers. Free movement of goods, persons, capital, and services without any regulatory obstacles can enhance the competitiveness of the EU's economy. Therefore European Commission (EC) created in October 2015 "The Single Market Strategy" (SMS). In the context of our research we decided to point out only selected points, we consider to be the most important in creation of a fertile ground for scale-ups to grow, which are: enabling the balanced development of the collaborative economy; helping SMEs and start-ups to grow; making the market without borders for services a practical reality; encouraging modernisation and innovation; modernising our standards system; consolidating Europe's intellectual property framework and creating a culture of compliance and smart enforcement (European Commission, 2015a).

Simultaneously, all sectors of society, economic sphere included, are vastly influenced by new digital technologies and innovations, which leads to the emergence of new business models such as startups and scaleups and even pushes traditional companies to innovate their way of thinking and working. EU reflects these new technological challenges and therefore focuses on the building of the DSM EU. *"A connected digital Single Market will improve access for consumers and businesses to online goods and services while creating the right conditions for networks to flourish and maximising the growth potential of Europe's digital economy."* (European Commission, 2015b, p.2). We consider this step to be very important, as most of the scaleups are digitally based platforms. As J. Janošec et al. accurately described in their article published in MM Science Journal in November 2017, *"it is crucial to follow new industry challenges as the upcoming digital revolution enables connectivity, automation, robotization etc. with the potential to change the productive structure and reorganise the value creation increasingly around digital platform ecosystems"* (Janošec, J. et al, 2017, p.1).

A huge step towards scaleup Europe happened at the World Economic Forum, which took place in Davos in January 2014, where EC established SEP. SEP is *"the first pan-European open innovation platform dedicated to transforming European startups into scaleups by linking them with global corporations"* (Startup Europe Partnership [online], 2018). SEP is led by Europe and the United States based global organisation Mind the Bridge, which is institutionally supported by the European Investment Fund, London Stock Exchange, European Business Angel Network, Cambridge University, IE Business School and Alexander von Humboldt Institute for Internet and Society and its business partners are for example Telefónica, Orange, Unipol Group, Microsoft and Nesta (Mind the Bridge, 2017). The main

and the most important goal of SEP is to map European scaleups and support the ones that are aspirants to become global businesses offering new jobs. European Scaleup process can be also eased by other companies taking part in SEP initiative by offering their investments, technologies and further help (Startup Europe Partnership, 2018).

Another initiative supporting the development of EU's startup and scaleup ecosystem is called "Startup Manifesto". It is important to note, that this document was created by European startups and other successful entrepreneurs as a reaction to the speech of Commissioner Günther Oettinger regarding the formation of better environment for scaleups. The Manifesto is a roadmap, which is divided into the following categories and their objectives (A Scaleup Manifesto, 2016):

- 1) **complete the single market** (simplify VAT system, test SMEs and add scaleup component to the test, edit copyright, data protection, support of e-Identity creation, make patent creation easier and cheaper, digital and better administration, invest in digital infrastructure, harmonise consumer law);
- 2) **mobilise capital** (complete the capital markets union, make effective tax system, crowd in capital);
- 3) **activate talent** (mobilise and attract talented workers, hire or train at least one additional employee);
- 4) **power innovation** (open government data, use sandboxes to test new models, fund research and innovation, flourish new business models, collaboration of startups and corporations);
- 5) **broaden education** (educate entrepreneurship, ICT and business skills);
- 6) **monitor, measure and evaluate** (observe and evaluate at local, national and European level, set up annual meetings of the community representatives).

The last document we will mention is called "Europe's next leaders: the Start-up and Scale-up Initiative" and it was created by EC in November 2016. European representatives are aware of the fact that fast-growing companies and innovative businesses can create new working opportunities and therefore increase innovation and competitiveness of the EU. This document also addresses a big problem for SMEs, startups, and scaleups - different tax regimes causing high tax-related costs which are even higher, if the company operates in more than one European country (European Commission, 2016b).

In abovementioned part, we defined the main European initiatives aimed to support the growth of scaleups. Now it is important to ask a question: How can functioning scaleups within EU's territory influence competitiveness of the EU? It is important to note, that according to EC's report "*it has been estimated that there could be up to 1 million new jobs created and up to €2 000 billion added to GDP in the EU over the next 20 years if the share of scale-ups would match that of the US*" (European Commission, 2016b, p. 2). One of the main elements influencing competition in the economy is also dynamism and innovation capabilities, which are nowadays closely connected to the digital development, information, and communication technologies and even population's skills and abilities in mentioned spheres. High significance has also triple helix thesis, based on the fact that economic and innovation development is positively influenced by the cooperation among universities, industries, and governments (Kreusel and Roth, 2018). However it is important to point out a fact that considering European region as a whole, it is not as competitive and innovative due to the high disparities in EU member states. So besides promoting European single market, EU should focus on mitigating these differences and promoting digital knowledge and skills of its population.

Professor Daniel Isenberg and Associate Professor Vincent Onyemah from Babson College presented on the World Economic Forum in Latin America paper about the importance of

scaleups in economic growth, because they are able to create more jobs, wealth and taxes. This is also one of the reasons, why EU member states should focus on building ground for scaleups to grow and not prioritize creation of new enterprises (Isenberg – Onyemah, 2017). Isenberg also points out, that *“the best scale-up environment has a modicum of start-ups. Just like doctors, teachers or scientists, start-ups are essential – but there is such a thing as having too many of them. It’s a law of physics. If you have lots of people starting companies, you can’t have lots of growing companies, partly because they compete for talent”* (Rock [online], 2017).

There are also other reasons, how can scaleups positively influence economic development and competitiveness. First of all, scaleups create more job opportunities than other businesses. By creating a friendly environment for scaleups and by helping them to grow, a dynamical job growth could be ensured. Another reason is that scaleups are able to offer more diverse business opportunities than high-tech startups, for example such as engineering firms, financial services, biomedical research or even electronics recyclers (Belk, 2017).

### 3. Analysis of Selected Scaleups

In the EU there are circa 3,950 scaleups with the capital raised \$55.6B. UK's share is approximately 36%, what is regarding current post-Brexit situation huge challenge for the EU. As it is obvious Britain is the biggest and the best startup ecosystem in the EU. It is followed by Germany with 442 scaleups and 10.1B, France, Spain, the Netherlands, Denmark, Ireland, Finland, Italy, Luxembourg, Belgium, Portugal, Poland, Austria, Estonia, and Lithuania. UK's share is approximately 36%, what is regarding current post-Brexit situation huge challenge for the EU (Mind the Bridge, 2017).

We decided to pick up the most successful European tech-scaleups and analyse their business. When identifying the best scaleups we have been inspired by a selection of best European Tech Scaleups from the project Startup Europe Comes to Silicon Valley (SEC2SV), organized by Mind the Bridge and EIT Digital with the support of the EC and European Parliament in 2017. Companies selection was based on following criteria: the significant growth of revenue and/or a number of employees during the last 3 years (the project was conducted during the August 2017) and they, scaleup companies, needed to be prepared for expansion into US market (Startup Europe Partnership, 2017). Due to a limited range of the paper, we will describe in detail only one scaleup from respective country.

We'll start our analysis with Austria's best scaleup called **App-Ray**. App-Ray is fully automated application security scanning solution, which provides automated security analysis of mobile applications to find security issues and mitigate risks. They claim that approx. 48% of organizations believe that their apps will likely be hacked and approx. 69% of mobile apps use encrypted plaintext communication. The company was founded in 2015 and is headquartered in Vienna (App-Ray Mobile Security, 2018).

Italy's best scaleup regarding above mention project is a mobile data company providing behavioural analysis and data-driven campaign based on geo-location information, called **Beintoo**. In their words: *“We collect and analyse geo-behavioral data in order to generate specific audiences to deliver innovative and highly engaging mobile campaigns”* (Beintoo, 2018, p.1). Beintoo claims that in Italy there are 45.2 million mobile phone owners of which 73,1% are smartphone owners on mobile audience. Moreover, 65% of the time is spent their time on the internet via mobile devices of which 88% time spent is on the mobile app. The company was founded in 2011 and is headquartered in Milan (Beintoo, 2018). There is another

team from Italy on the list of the most successful scaleups from EU. They are called **Buzzoole** (Startup Europe Partnership, 2017).

**BitBar** a solution from Finland that automates mobile testing, building, monitoring and deployment processes for enterprises in general is another current top scaleup from EU. BitBar offers Testdroid Recorder, an eclipse plugin for recording user actions and generating reusable test cases. The company was founded in 2009 and is based in Helsinki. (BitBar, 2018) There are another two successful scaleups from Finland. The first is **Swap** and the second **Wirepas Oy** (Startup Europe Partnership, 2017).

**Five Degrees** from Netherlands represents banking technology with online digital banking platform, that automate banking processes. In other words, Five Degrees and its Matrix-five platform comprises CRM, workflow, document archiving, business validation and communication modules. Five Degrees was founded in 2009 and is based in Loenen aan de Vecht (Fivedegrees, 2018).

**Ignilife** from France creates digital platform to empower people to be active in managing their own health. Methods as gamification and social interaction are used to encourage positive behavior. Ignilife was founded in 2015 and is headquartered in a European technology park in Sophia Antipolis. (Ignilife, 2018) Another France's scaleup from the list is called **Semarchy** (Startup Europe Partnership, 2017).

**OnePulse** from UK is self-service platform that allows businesses to ask targeted groups of people questions in the form of micro-surveys and receive answers within few seconds. For better illustration of the company's clients we would like to demonstrate just a few of them. Coca-Cola, Barclays, Google, Tesco, Virgin Media and many others worlds big players are getting their answers on OnePulse. The company was founded in 2011 and is based in London. Another UK's scaleups that are part of this list are **Primo** and **Sunamp** (Startup Europe Partnership, 2017).

Germany's **ProGlove** enhances hands of professionals, enabling manufacturing and logistics staff to works safer, faster and easier. ProGlove provides a suite of connected capabilities to every user with their wearable smart glove. The company Workaround GmbH, which develops ProGlove was founded in 2014 and is based in Munich (ProGlove, 2018).

Another scaleup called **Redborder**: ENEO Technologia S.L. is an all in one cybersecurity open source platform for businesses and enterprises. Redborder is a Spanish cybersecurity solution created to improve device data losses efficiency and streamline operations on operational efficiency in multi-vendor network monitoring. The company was founded in 2003 and is based in Sevilla (Redborder, 2018).

The last scaleup in the list is **Sentiance** from Belgium. Sentiance is turning IoT sensor data into insights about user's behavior in real time context. The company operates in following sectors: Insurance, Health, Commerce, Mobility, Connected Car – Automotive, Smart Home and Smart City (Crunchbase, 2018).

All the above mentioned companies have a great chance to become European new unicorns and become the integral part of the exclusive group of companies as Adyen, Asos, Zoopla, Yandex, Avito, Criteo, VKontakte, Markit and many others. Nowadays, there are more than 47 European unicorns, companies that can compete with the very best, anywhere in the world. From the wider perspective, it's very interesting to compare the EU's and the US values when talking about unicorns and innovations. When in the EU tech valuations are, on average 18 times the revenue produced by the company, in the US this number is considerable higher, at 48 times. In 2016 there was 30 new unicorns in the US, what is over three times the number

in Europe. Moreover, the average revenue of the European unicorns is approximately \$315 million compared to \$129 million as a revenue of US unicorns. The cumulative value of European unicorns is now more than \$130 billion (Madhvani et al., 2016). Due to our own research on scaleups perception of the quality of startup ecosystems in the EU and the USA, conducted in February and March 2018 we've found out, that the EU has a worse perception of the quality of incubators and accelerators, platforming platforms, investors, funding mechanisms and media and lower level of cooperation of corporations and universities with scaleups than the US. The quality of events and startups itself was on the same high level on both sides and the perception of the level of administrative barriers connected with Intellectual Property Rights was on the same medium level. As a main need of the European startup ecosystem was stated the improvement of venture funding opportunities.

#### **4. Conclusion**

Not only the EU member states realize that scaleups are important for economic growth and competitiveness (we can mention Brazil, Canada or Singapore). Based on our research and questionnaire we can conclude that nowadays is the best environment for scaleups in the USA, however the EU also takes new steps to improve economic conditions for scaleups to grow in order to enhance its competitiveness within global economy. In achieving mentioned goals, the EU should focus mainly on few aspects. First one is financing. Only small percentage (2%) of scaleups in the EU decide to go public and the rest is still funded by venture capital. In this context it is also important to note, that the UK is still a leading European country, whose scaleups raised the highest capital on the stock markets. On the other hand, American initial public offering scaleups are able to raise six-times more capital than European ones, because the US market offers higher valuations (Pisoni and Onetti, 2015).

It is important to note, that the highest number of effective functioning scaleups are located in UK, so Brexit will not only have negative influence on the Scaleup European ecosystem, but also on the EU's economy as whole. The EU should therefore support more scaleups in the EU member states. Another important step is to remove existing regulatory and administrative barriers in SM EU and in DSM EU and to create more business opportunities for cooperation with global corporations, investors and other potential partners.

Furthermore, the EU states should also focus on promoting scaleups and their growth and not on creating more new businesses because it causes so-called "scaleup-gap" – there is not enough firms to displace older businesses which can result into a reduction of economic growth and productivity. To ensure a higher quality of businesses, governments should also focus on targeted investments in specific scaleups (Aernoudt, 2017).

We can conclude, that scaleups are sources of innovations and they play important role in growth of economy because they can create more job opportunities than regular companies and thus increase the EU's GDP. This is also a reason, why researchers should pay more attention to scaleups and also unicorns and not just in the context of their research, but they should also try to enhance their cooperation.

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## References

- [1] A Scaleup Manifesto (2016). *A Manifesto for Change and Empowerment in the Digital Age* [online]. [cit.2018-02-25]. Available at: [http://scaleupeuropemanifesto.eu/pdf/Scale\\_Up\\_Europe\\_Brochure.pdf](http://scaleupeuropemanifesto.eu/pdf/Scale_Up_Europe_Brochure.pdf).
- [2] Aernoudt, R. (2017). Executive Forum: The Scale-Up Gap: And How To Address It. *Venture Capital*, vol. 19, iss. 4, pp 361-372.
- [3] App-Ray Mobile Security (2018). *Fully Automated Mobile Application Security*. [online]. [cit.2018-02-22]. Available at: <http://app-ray.co/>.
- [4] Beintoo (2018). *Who we are* [online]. [cit.2018-02-22]. Available at: <http://www.beintoo.com/who-we-are/>.
- [5] Belk, C. (2017). *3 Reasons "Scaleup" Businesses Are Just As Important As Startups* [online]. [cit.2018-02-27]. Available at: [https://www.huffingtonpost.com/cathy-belk/3-reasons-scaleup-busines\\_b\\_8970066.html](https://www.huffingtonpost.com/cathy-belk/3-reasons-scaleup-busines_b_8970066.html).
- [6] Bitbar (2018). *We Make Mobile Developers' Lives Easier* [online]. [cit.2018-02-23]. Available at: <https://bitbar.com/about/>.
- [7] Crunchbase (2018). *Sentiance* [online]. [cit.2018-02-21]. Available at: <https://www.crunchbase.com/organization/sentiance>.
- [8] Deloitte (2014). *A report by Deloitte. The Scale-up Challenge* [online]. [cit.2018-02-25]. Available at: <https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/strategy/deloitte-uk-scale-up-challenge.pdf>.
- [9] Gaskel, G. (2016). *The Scaleup Manifesto: How Britain is Becoming the Scaleup Nation of the World* [online]. [cit.2018-02-27]. Available at: [http://www.scaleupinstitute.org.uk/wp-content/uploads/2016/11/LSE\\_SLIDES.pdf](http://www.scaleupinstitute.org.uk/wp-content/uploads/2016/11/LSE_SLIDES.pdf).
- [10] European Commission, (2016b). *Europe's next leaders: the Start-up and Scale-up Initiative* [online]. [cit.2018-02-26]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2016:733:FIN>.
- [11] European Commission. (2015a). *A Single Market Strategy for Europe - Analysis and Evidence* [online]. [cit.2018-02-25]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52015SC0202>.
- [12] European Commission. (2015b). *Upgrading the Single Market: more opportunities for people and business* [online]. [cit.2018-02-24]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2015%3A550%3AFIN>.
- [13] European Commission. (2016a). *A new initiative for startups to start and scale up in Europe* [online]. [cit.2018-02-24]. Available at: <https://ec.europa.eu/digital-single-market/en/news/new-initiative-startups-start-and-scale-europe>.
- [14] Fivedegrees (2018). *Who we are* [online]. [cit.2018-02-22]. Available at: <https://www.fivedegrees.nl/about>.
- [15] Fránková, Š. (2016). Instruments for Innovation Support and Their Classification: an Example of Instruments used in European Countries. In *3<sup>rd</sup> International Conference on European Integration 2016*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, 2016, pp. 239-246.

- [16] Ignilife (2018). *We have a mission* [online]. [cit.2018-02-21]. Available at: <http://ignilife.com/company.html>.
- [17] Isenberg, D. and Onyemah, V. (2017). Start-ups won't save the economy. But 'scale ups' could. In *World Economic Forum on Latin America*. Buenos Aires, Argentina [online]. [cit.2018-02-25]. Available at: <https://www.weforum.org/agenda/2017/03/start-ups-entrepreneurship-scale-ups-latin-america/>.
- [18] Janošec, J. et al (2017). Influence of Digital Platforms on the European Industry and Policy Making. *MM Science Journal 2017* (11). pp.1869-1872.
- [19] Kreusel, N. and Roth, N. (2018). European Business Venturing In Times Of Digitisation - An Analysis Of For-Profit Business Incubators In A Triple Helix Context. *International Journal of Technology Management*, vol. 76, iss. 1-2, pp. 104-136.
- [20] Madhvani, M. et al. (2016). *European Unicorns 2016* [online]. [cit.2018-02-25]. Available at: <https://www.gpbullhound.com/wp-content/uploads/2016/06/GP-Bullhound-Research-European-Unicorns-2016-Survival-of-the-fittest.pdf>.
- [21] Mind the Bridge. (2017). *SEP Monitor. June 2017. Scaleup Europe* [online]. [cit.2018-02-24]. Available at: <http://startupeuropepartnership.eu/scaleup-europe-monitor2017/>.
- [22] Mintoff, S. (2017). *Informal Meeting of Competitiveness Ministers (COMPET)*. [online]. [cit.2018-02-26]. Available at: <https://www.eu2017.mt/en/Events/Pages/Informal-Meeting-of-Competitiveness-Ministers.aspx>.
- [23] Pisoni, A. and Onetti, A. (2015). The Growth Path of Venture-Backed ICT Scaleups. In *8th Annual Conference of the EuroMed Academy of Business: Innovation, Entrepreneurship and Sustainable 2015*. Verona, Italy: EuroMed Press, pp. 2695-2698.
- [24] ProGlove (2018). *1st Smart Glove for Industries* [online]. [cit.2018-02-21]. Available at: <http://www.proglove.de/product/technology/>.
- [25] Redborder (2018). *What is redborder?* [online]. [cit.2018-02-23]. Available at: [https://redborder.com/en/solution/what\\_is\\_redborder.php](https://redborder.com/en/solution/what_is_redborder.php).
- [26] Rock, S. (2017). *The new physics of growth: why scale-ups are the new start-ups* [online]. [cit.2018-02-26]. Available at: <http://www.managers.org.uk/insights/news/2017/january/the-new-physics-of-growth-why-scale-ups-are-the-new-start-ups>.
- [27] Startup Europe Partnership (2017). *Here are the top 15 EU scaleups selected for SEC2SV 2017* [online]. [cit.2018-02-20]. Available at: <http://startupeuropepartnership.eu/selected-sec2sv-2017/>.
- [28] Startup Europe Partnership (2018). *About Startup Europe Partnership* [online]. [cit.2018-02-20]. Available at: <http://startupeuropepartnership.eu/about-sep/>.



## Important Milestones in the Common History of Selected European Countries and their Impact on Culture

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### **Abstract**

*The main objective of the present paper is to highlight the most significant milestones in the common history of Slovakia and Austria as neighboring countries located in Central Europe. We will predominantly focus on the 20<sup>th</sup> century, which may be characterized by intensification of European integration. However, several events and developments from older periods will be included, as well. Next, we will examine the influence of selected historical circumstances on the cultural profiles of both countries. For this purpose, a brief comparative analysis of the respective national cultures is required. Hereby, respected authors and scholars involved in the topic of cultural differences and cultural categorization will be referred to. The aim of the article is thus to demonstrate how important role history plays in relation to the development of a culture. Throughout the whole research, the aspect of European civilization will be underlined.*

**Keywords:** Austria, culture, European civilization, history, Slovakia, 20<sup>th</sup> century

**JEL Classification:** N00, N30, Z13

### **1. Introduction**

Slovakia and Austria are countries characterized not only by their being neighbouring countries and important business partners, but as well by their for centuries interlinked history.

In the present paper we attempt to identify the most significant milestones in the mutual Austrian-Slovak history, whereby the focus is put on the 20<sup>th</sup> century. The selected historical events are consequently examined in connection to the cultural profiles of the both countries. The objective is to point out the influence of historical circumstances on development of the countries' cultural profiles. However, in our opinion, the geographical proximity and co-existence in central Europe has caused significantly less differences in cultures than could be observable, for instance, between a European and an East Asian culture. According to Delgadova and Gullerova „similarities between cultures draw people closer to one another and facilitate interaction,” (2015, p. 190). As Baculáková (2014) points out, Slovak culture is an important component of European culture. We believe, this statement can identically be applied to Austrian culture as well.

Without doubts, the historical development has impacted not only cultural profiles of the countries, but also their socio-economic position, not only within the European Union. For instance, both countries are characterized by ageing populations (Šotkovský, 2012; Čiefová and Raneta, 2017). Austria also belongs to successful countries on the field of innovations

(Lipková, 2012). Slovakia's economic situation has improved considerably since its accession to the European Union in 2004 (except for the year 2008), whereby foreign direct investments have played a significant role in this development (Krajčo, 2014). A large proportion of foreign companies in Slovakia, more specifically in Bratislava and surrounding areas, are of Austrian origin (Čiefová and Seresová, 2017). In general, Slovak economy has changed in recent years, as far as its structure is concerned (Kubičková, Benešová and Breveníková, 2016).

## 2. Problem Formulation and Methodology

As already stated above, the main intention of this contribution is to prove the linkage between a country's history and its cultural characteristics. In order to prove this statement, we will analyse mutual Austrian-Slovak recent history and its impact on both national cultures.

Our research is divided into several partial analyses. Firstly, we will examine the mutual history of both countries and select the most important milestones, primarily in the 20<sup>th</sup> century. For this purpose, relevant scientific literature sources will be applied.

One of the works we find especially useful for our research is the one by Zuzana Poláčková. In her monography *Za oponou slovensko-rakúskych vzťahov v 20. storočí* she discusses topics such as Slovak (as well as Czech) minority in Vienna, relations between Vienna and Bratislava after 1918, political situation in Austria after 1945, or the relations of the countries after 1968.

Another noteworthy book is the proceedings edited by Emilia Hrabovec and Beata Katrebova-Blehnova, *Slowakei und Österreich im 20. Jahrhundert: Eine Nachbarschaft in historisch-literarischer Perspektive*, including contributions concerning for instance history of Slovaks in Austria, or Slovak political exile in Austria between 1945-1955.

Investments and trade relations, history, European integration, as well as cross-border cooperation are all topics included in the publication *Dve dekády slovensko-rakúskych vzťahov* (Benč, Bilčík, Duleba, Gruber and Strážay, 2013). The issues of cross-border cooperation, for instance concerning the Twin City project, are also discussed by Mattoš (2014).

The second part of our work is engaged in cultural characteristics of Austria and Slovakia. As several approaches of classification of cultures exist, we have selected two respected authors, whose research will represent the basis of our analysis. The first of them is Geert Hofstede (et al., 2010) and his concept of cultural dimension; the latter is Richard D. Lewis (2006) and his categorization of cultures.

Based on the two partial analyses, i. e. the examination of the mutual history and identification of the most important milestones, and the culture-related comparative analysis, the connection between the historical and cultural aspect will be demonstrated.

## 3. Brief Outline of Mutual Austrian-Slovak History

History is an important element in Austrian-Slovak relations. Universally, history is not only a component of culture, but it itself influences the mentality and culture. Therefore, we attempt to point out the linkage between mutual history of both nations and their cultural profiles, whereby our focus is predominantly on the 20<sup>th</sup> century. This may, in fact, partially influence our findings, as culture is in constant development, with much older periods impacting it.

In spite of rich mutual connections and geographical proximity, the history of complex mutual relations needs to be detected and written. Moreover, there is a deficiency of knowledge on the population's side (Hrabovec, 2008).

Slovak history can generally be characterized by migration tendencies. In this regard, Austria was frequently the target destination of Slovaks. One of the periods of Slovaks' relocation to Austria was the time of inner migration within the Austro-Hungarian state, the 20<sup>th</sup> century as seasonal migration, and then the period after the World War II due to political reasons (political emigration) (Rydlo, 2008). The area of contemporary Austria has thus been a meeting point of Germanic and Slavic world. Regarding the numerical data, the highest number of Slovaks living in Austria was registered around 1900. A decrease started prior to the World War I (Rydlo, 2008).

The period between 1938-1945 represents an atypical chapter in history of the Slovak Republic, as well as of Austria (*Ostmark*) as a part of the Third Reich. In this era characterised by totalism, the mutual relations discontinued (Poláčková, 2013). An important milestone is the year 1948, in which the communists came to power in Czecho-Slovakia. By this situation, the migration was triggered (Rydlo, 2008). In 1955, Austria achieved independence, after it had been occupied by the four powers between 1945-1955. In this regard, the issue of national identity is rather crucial, as the *Anschluss* hindered creation of Austrian identity and national consciousness, which was, on the other hand, empowered at the time of the occupation by the four powers (Poláčková, 2013). In the context of the Cold War, new importance was attached to the proximity of Austria from Slovak perspective (Gruber, 2013). Another noteworthy historical circumstance occurred in August 1968, when occupation of Czecho-Slovakia by the Warsaw Pact commenced. Similarly, the migration from Slovakia was intensified by this development. When migrating through Austria, legal protection as well as economic and social aid was provided to Slovaks. In November 1989, as the iron curtain fell, Slovaks from Austria could have crossed the border again (Rydlo, 2008). According to Poláčková (2013), the year 1989 is a fundamental milestone in the mutual history of the two states after the World War II, as up to this point both countries had belonged to two different parts of the bipolar Europe.

The division of the world after the World War II was crucial in relation to economic development of European countries. Suppan (2008), for instance, points out the rejection of the Marshall Plan, which resulted in considerable divergence between the two blocks regarding their economic situation; therefore, logically, between Czecho-Slovakia and Austria, too. Similarly, Kirschbaum (2008) emphasises the fact of Austria's not having been part of the Soviet bloc but an integral part of the Western European economy, which he calls „*good fortune*” (Kirschbaum, 2008, pp. 225). Even today we can witness a gap in economic indicators, for example is the value of indexes measuring national competitiveness (such as the Global Competitiveness Index by the World Economic Forum).

When the separation of Czecho-Slovakia was being conducted, Austria had less doubts about Slovakia's viability than many other countries, and thus due to information and contacts (Gruber, 2013). Slovakia became an independent state in 1993, which was followed by acceptance from Austrian side, since Slovakia was considered to be a relatively important partner and player in the region (Kirschbaum, 2008) and future cooperation was found to have high potential (Gruber, 2013). Since then, bilateral political relations have been maintained. These relations, however, were based on a long common history. In the 90s, Austria was supporting the idea of Slovakia's integration into European structures and was an advocate of Slovakia's political and economic stability (Gruber, 2013).

#### **4. Comparison of Austrian and Slovak National Culture**

The following part of the article aims to summarize the most significant attributes of Slovak and Austrian national culture. Since a variety of models characterising and describing cultures

exist, only two models are applied in the present paper, namely the model of Richard D. Lewis and the model of Geert Hofstede.

#### **4.1 Austrian and Slovak Culture Based on the Model of Richard D. Lewis**

Currently, there is an enormous variety of cultures in the world. „*The several hundred national and regional cultures of the world can be roughly classified into three groups: task-oriented, highly organized planners (linear-active); people-oriented, loquacious interrelators (multi-active); and introverted, respect-oriented listeners (reactive)*,” (Lewis, 2006, p. 27). Both Austrians and Slovaks are situated on the linear-active – multi-active scale, with Austrians being located closer to the ideal linear-active state, and Slovaks demonstrating more features of multi-active cultures (Table 1). As we can see, the majority of cultures on this line are European cultures (or descendants of Europeans). Only a few cultures from the European area are situated on the linear-active – reactive scale. This enhances the presumption of cultural similarities being more frequent than differences in the European context, and the idea of common European civilization.

In general, Latin Americans or Arabic cultures are considered to be the most multi-active ones. These may be characterised as extrovert, impatient, talkative, not punctual. Besides, doing several things at once is rather common. On the other hand, German and Swiss culture represent typical examples of linear-active cultures. According to Lewis (2006), individuals from linear-active cultures tend to be introvert, patient, quiet, and punctual. Planning ahead methodologically and focusing on one thing at a time only are examples of typical behaviour of representatives of linear-active cultures. Based on this model, Slovaks are supposed to be more extrovert and less punctual than Austrians. Austrians, in contrast to Slovaks, are more likely to be planners, sticking to plans and facts, and confronting with logic rather than with emotions. Apart from that, Austrians are more likely to separate the professional and social sphere, whereas Slovaks tend to interweave them (Lewis, 2006).

However, it needs to be emphasised that we talk about tendencies and presumptions, since exceptions might exist. One can surely encounter an introverted representative of Slovak culture who always focuses exclusively on a single task at a time (Čiefová, 2017).

**Table 1: Scale of Linear-Active and Multi-Active Cultures**

1. Germans, Swiss
2. Americans (WASPs)*
3. Scandinavians, Austrians
4. British, Canadians, New Zealanders
5. Australians, South Africans
6. Japanese
7. Dutch, Belgians
8. American subcultures (e.g., Jewish, Italian, Polish)
9. French, Belgians (Walloons)
10. Czechs, Slovenians, Croats, Hungarians
11. Northern Italians (Milan, Turin, Genoa)
12. Chileans
13. Russians, other Slavs
14. Portuguese
15. Polynesians
16. Spanish, Southern Italians, Mediterranean peoples
17. Indians, Pakistanis, etc.
18. Latin Americans, Arabs, Africans
*White Anglo-Saxon Protestants

Source: Lewis, 2006, p. 33.

Lewis further describes individual national cultures in more detail. He summarizes Austrian and Slovak values as shown in Table 2.

**Table 2: Austrian and Slovak Cultural Values**

Austrian values	Slovak values
Hospitable, traditional, old-fashioned, nostalgic, sentimental, romantic, love nature, clean, Catholic, pessimistic, respect education, self-deprecatory humor, hypersensitive to criticism, lack self-assurance, chivalrous, charming, class conscious, stylish	extended families, closeness to nature, respect for education, attachment to folklore, folk art, love of music and sport, epicureanism, defense of their Slovak nation and culture, attachment to popular traditions, rather religious (marriage, baptism, funerals), sense of historical victimization, lack of self-confidence

Source: Lewis, 2006, p. 234 and 298

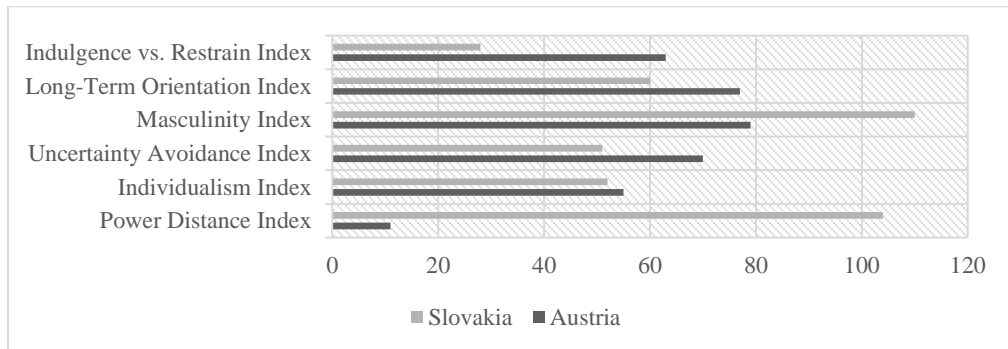
According to Lewis (2006), Austrians generally lack self-confidence. Private networks and family connections are rather influential. The important thing to mention is the regional aspect, i.e. the differences for instance between the Viennese and the Tyrolese. In this place we would like to add that regional differences with no doubt exist also in Slovakia. In our research, however, these are not considered. On the hand, both Austrian and Slovak cultures are regarded from the general perspective.

Slovaks demonstrate a historically developed victim mentality. Moreover, some Slovaks are anxious of responsibility, although, on the other hand, they are usually more punctual than the rest of the Slavs. Taking the European context into account, Slovakia is a relatively new nation state, inhabited by polite people willing to learn (Lewis, 2006, p. 297-300). However, historical circumstances have resulted in Slovaks not being fully confident as far as their national consciousness is concerned. As Rydlo (2008) states: „*Hinzu kamen – historisch bedingt – das geschwächte Nationalbewusstsein und größere Assimilationsbereitschaft der Slowaken* (Rydlo, 2008, p. 53).

#### ***4.2 Austrian and Slovak Culture in the Context of Hofstede's Dimensions***

Another approach we would like to apply within the present paper is the concept of cultural dimensions, as introduced by Geert Hofstede. He is not the only author dealing with cultural dimension, nevertheless, his work surely belongs to the most cited and respected ones.

Originally, there used to be four dimensions of national cultures, namely power distance, individualism vs. collectivism, masculinity vs. femininity, and uncertainty avoidance. However, two more were added later, in concrete long-term orientation and indulgence vs. restraint.

**Figure 1: Dimensions of National Culture of Slovakia and Austria**

Source: Hofstede, Hofstede and Minkov, 2010 (own elaboration)

The comparison of cultural dimensions of both countries shows interesting results. On the one hand, the index of some dimensions differs only slightly. On the other hand, in some cases the difference is considerable, for instance within the power distance dimension. Slovakia, based on its high score, can be defined as a large-power-distance country, which means the unequal distribution of power is accepted and expected. This may as well be applied to the work sphere.

Another visible difference demonstrates the indulgence vs. restraint index. Due to the fact that this dimension is relatively new, and as the authors themselves emphasise, it deserves more study, we include the whole definition: „*Indulgence stands for a tendency to allow relatively free gratification of basic and natural human desires related to enjoying life and having fun. Its opposite pole, restraint, reflects a conviction that such gratification needs to be curbed and regulated by strict social norms,*” (Hofstede, Hofstede and Minkov, 2010, p. 281). A country’s score within this dimension is influenced by several factors. For instance, national wealth plays an important role. According to the authors, national wealth is liable for approximately 10 per cent of differences regarding indulgence among countries (Hofstede, Hofstede and Minkov, 2010). We believe, Austria’s strong economic position may thus be interconnected with its score within this dimension. Besides, more indulgent cultures tend to have more optimistic population (Hofstede, Hofstede and Minkov, 2010).

Noteworthy is also the difference in masculinity. In a masculine society, there is a distinction between emotional gender roles, i.e. men are supposed to be focused on material success and show assertiveness. To women, modesty and quality of life are the principal values. In a feminine society, there is no clear distinction between emotional gender roles. This means, men as well as women tend to be modes and tender (Hofstede, Hofstede and Minkov, 2010). Applying this model to the analysed countries, Slovakia with its high score within the index is supposed to clearly mirror both masculine and feminine tendencies. Austria’s score, although still relatively high, results as well in a certain amount of femininity.

We can further conclude that common history in central Europe does not necessarily guarantee identical cultural values and cultural characteristics, as certain differences within the dimensions occur.

## 5. Conclusion

In the present paper we attempted to discuss the connection between Austrian-Slovak historical development in the 20<sup>th</sup> century and their cultural profiles.

Having conducted the analysis of historical events and the comparison of the national cultures, several results can be drawn. For instance, based on the Lewis's model, Austria demonstrates rather linear-active tendencies, in contrast to predominantly multi-active Slovakia. This might have been intensified during the Cold War by maintaining contacts to other Slavic cultures, that are usually also located on a very similar place on the scale. Regarding Hofstede's dimensions, Austria is more indulgent than Slovakia. Since Austria's economy was not part of the Soviet bloc, it flourished, and it still belongs to the most innovative and competitive countries.

It needs to be emphasised that the present research may be limited by the analysed timeframe, as well as by solely two models of cultural comparison having been applied. Therefore, further debate on the topic is highly welcome. On the other hand, we are convinced our research is relevant in today's globalized world.

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### ***References***

- [1] Baculáková, K. (2014). 10 Rokov Slovenska v EÚ: rozvoj kultúry a kreatívneho priemyslu a implementácia kultúrnej politiky na Slovensku. In *Ten Years of the Slovak Republic Membership in the European Union. Economic, Political and Legal Aspects*. Bratislava: University of Economics in Bratislava, Faculty of International Relations, pp. 13-19.
- [2] Benč, V., Bilčík, V., Duleba, A., Gruber, S. and Strážay, T. (2013). *Dve dekády slovensko-rakúskych vzťahov*. Bratislava: Výskumné centrum Slovenskej spoločnosti pre zahraničnú politiku, Veľvyslanectvo Rakúskej republiky v Slovenskej republike.
- [3] Čiefová, M. (2017). Characteristics of Slovak Culture in the Context of Bilateral Austrian-Slovak Relations. *Journal of Intercultural Management*, vol. 9, iss. 2, pp. 81-101.
- [4] Čiefová, M. and Raneta, L. (2017). Demografické trendy na Slovensku a v Rakúsku. In *Economic, Political and Legal Issues of International Relations 2017*. Bratislava: University of Economics in Bratislava, Faculty of International Relations, pp. 77-86.
- [5] Čiefová, M. and Seresová, K. (2017). Teaching Foreign Languages at the University of Economics in Bratislava in Connection to the Needs of the Labour Market. *Advanced Education*, iss. 8, pp. 28-34.
- [6] Delgadova, E. and Gullerova, M. (2015). The Role of Culture in Communication. In *International Relations 2015: Current issues of world economy and politics*. Bratislava: University of Economics in Bratislava, Faculty of International Relations, pp. 187-196.
- [7] Gruber, S. (2013). Dejiny a politika. In Benč, V., Bilčík, V., Duleba, A., Gruber, S. and Strážay, T. *Dve dekády slovensko-rakúskych vzťahov*. Bratislava: Výskumné centrum Slovenskej spoločnosti pre zahraničnú politiku, Veľvyslanectvo Rakúskej republiky v Slovenskej republike, pp. 8-18.

- [8] Hofstede, G., Hofstede, G. J. and Minkov, M. (2010). *Cultures and Organizations. Software of the Mind. Intercultural Cooperation and Its Importance for Survival*. New York: McGraw-Hill.
- [9] Hrabovec, E. and Katrebova-Blehova, B. (eds). (2008). *Slowakei und Österreich im 20. Jahrhundert. Eine Nachbarschaft in historisch-literarischer Perspektive*. Vienna: Lit Verlag.
- [10] Hrabovec, E. (2008). Einige einleitende Gedanken zu österreichisch-slowakischen Beziehungen im 20. Jahrhundert. In Hrabovec, E. and Katrebova-Blehova, B. (eds.). *Slowakei und Österreich im 20. Jahrhundert. Eine Nachbarschaft in historisch-literarischer Perspektive*. Vienna: Lit Verlag, pp. 1-5.
- [11] Kirschbaum, S. J. (2008). Slovakia's Image in the Austrian Press after Independence. In Hrabovec, E. and Katrebova-Blehova, B. (eds.). *Slowakei und Österreich im 20. Jahrhundert. Eine Nachbarschaft in historisch-literarischer Perspektive*. Vienna: Lit Verlag, pp. 225-236.
- [12] Krajčo, K. (2014). Analysis of Foreign Direct Investment in the Industry of the Slovak Republic. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 365-371.
- [13] Kubičková, V., Benešová, D. and Breveníková, D. (2016). Relationships between Innovations and Productivity in the Services in the Slovak Economy. *Journal of Technology Management and Innovation*, vol. 11, iss. 2, pp. 46-55.
- [14] Lewis, R. D. (2006). *When Cultures Collide. Leading across Cultures*. Boston: Nicholas Brealey International.
- [15] Lipková, L. (2012). Innovation Policy of the European Union. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 171-178.
- [16] Mattoš, B. (2014). Determinants of cross-border cooperation between Austria and Slovak Republic: the role of Bratislava and Vienna in the development of mutual contacts. *Polish Borderland Studies*, vol. 2, iss. 2, pp. 184-195.
- [17] Poláčková, Z. (2013). *Za oponou slovensko-rakúskych vzťahov v 20. storočí*. Bratislava: Veda.
- [18] Rydlo, J. M. (2008). Einige Gedanken zur Geschichte der Slowaken in Österreich. In Hrabovec, E. and Katrebova-Blehova, B. (eds.). *Slowakei und Österreich im 20. Jahrhundert. Eine Nachbarschaft in historisch-literarischer Perspektive*. Vienna: Lit Verlag, pp. 41-55.
- [19] Suppan, A. (2008). Die Slowakei zwischen Ostmitteleuropa und Europäischer Union. In Hrabovec, E. and Katrebova-Blehova, B. (eds.). *Slowakei und Österreich im 20. Jahrhundert. Eine Nachbarschaft in historisch-literarischer Perspektive*. Vienna: Lit Verlag, pp. 215-223.
- [20] Šotkovský, I. (2012). Change of the Population Size and the Ageing Process of the EU Countries after 1990. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 315-322.
- [21] World Economic Forum (2017). *The Global Competitiveness Report 2017-2018*. Geneva: World Economic Forum.



## **Determinants of Foreign Direct Investment in CEEC: with Focus on Slovakia and Manufacturing Sector**

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### **Abstract**

*Eastern European countries (CEECs) started to be popular destinations for foreign direct investment (FDI) inflows not until 1990s and over time became successful FDI recipients. Currently, an ongoing investment of Jaguar Land Rover into Slovakia is a highly discussed topic. As the inflows of FDI to CEECs gained importance over time, helped by becoming the European Union (EU) member or candidate countries, it is necessary to understand the main factors attracting FDI into this region. As FDI decisions are mainly sector oriented, it is also necessary to focus on sector level. Nevertheless, such studies are very rare especially owing to issues related to data collection. Therefore, this paper is devoted to the topic of determinants of FDI in CEECs with focus on Slovakia and manufacturing sector. The aim of the paper is to identify the main factors affecting the FDI flows in CEECs focused on Slovakia and manufacturing sector.*

**Keywords:** European union, foreign direct investment, sector analysis, Slovakia

**JEL Classification:** F21, F23, N64

### **1. Introduction**

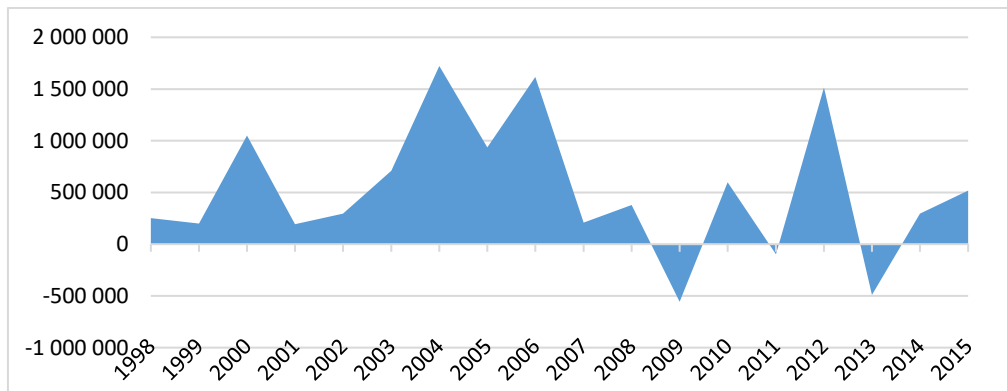
Nowadays, foreign direct investment (FDI) is seen as a tool and as a driving force of companies to expand their power across new territories. Companies which decide to go international often invest into production i.e. the international production which is usually perceived as production financed by FDI. Dunning (1988, p. 1) defined the international production as: “*a value-adding activity which is owned or produced by a firm (or group of firms) outside its (or their) national boundaries.*” This definition has been later widened to: “*all value adding activities in one country, which either includes intermediate products supplied by a firm from another, over which it continues to exercise some organizational governance for a specified or indefinite time period.*”

For a host country, FDI inflows are often seen not only as a significant non/debt source of financing which helps long-term economic growth and development more than other forms of capital inflows but also e.g. as a source of knowledge, technology transfer, job creation, increased work productivity, development of human capital etc. The European Union (EU) shares a similar approach and tries to attract FDI flows especially from external investors, see Assuncao etc. (2011).

Central and Eastern European countries (CEEC) experienced a massive increase of FDI inflows and became successful recipients of FDI compared to the period before launching transition processes towards democracy and market economy, before becoming member countries of various international organizations and finally before integrating themselves into the European integration. All previously mentioned activities massively helped them to attract

FDI, see Resmini (2000) or Tintin (2013). For illustration, table 1 shows Slovakian FDI inflows in 1998-2015 and proves that Slovakia, as a CEEC, has become a significant FDI recipient.

**Table 1: Slovakian FDI Inflows in 1998-2015 (Thousands EUR)**



Source: National Bank of Slovakia (2017a, 2017b), own calculation

Resmini (2000) mentions that it has already been published much about FDI trends in CEEC but it is also very important to understand the determinants stimulating foreign investors to engage in this region. Therefore, the aim of this paper is to identify the main factors affecting the FDI flows in CEECs again with a focus on Slovakia and manufacturing sector. After all, the FDI decision is not only country oriented but mainly sector oriented. Slovakia, as a representative of CEECs, was chosen for this reason: since 2015, when Slovakian government and British company Jaguar Land Rover signed an investment agreement about building a factory production line in Nitra region, see Vlada (2015), Slovakia as a FDI recipient has been a highly discussed topic. The manufacturing sector, a traditional sector of Slovakian economy, was identified as the most invested Slovakia economic sector from 1998-2015, see table 2, and therefore chosen as another interest of this paper. Sabol and Hoskova (2004) confirm the attractiveness of the chosen sector in Slovakia.

**Table 2: The First Five FDI Recipients: Slovakian Sectors in 1998-2015 (the Sum of Annual Values)**

Sector	Position	FDI inflows (thousands EUR)
Manufacturing	1.	9,342,093
Financial and insurance activities	2.	6,123,953
Electricity, gas, steam, air conditioning and water supply, sewerage, waste management and remediation activities	3.	3,563,074
Real estate activities, professional, scientific, technical, administrative and support service activities	4.	3,116,762
Transportation and storage, information and communication	5.	2,568,359
All sectors	X	28,379,393

Source: National Bank of Slovakia (2017a, 2017b), own calculation

## 2. Theoretical Approach to FDI Determinants

In professional literature, it is possible to find several explanations why companies decide to internationalize and to engage in FDI. Dunning (1988) states that some authors follow and respect only few of the following statements, while some authors rather have a mixed approach and accept all of them:

- a. There is the existence of some market imperfections.
- b. Enterprises try to reduce their transactional costs.
- c. Enterprises tend to enhance their value-adding skills.
- d. Enterprises tend to gain the dominant or monopolistic position on the market.

Dunning (1988) adds that all of them are preceded by two main assumptions. The first assumption is that company is able to supply the foreign market, independently on whether the production itself is produced within a domestic or foreign country. The second assumption is as follows: the turning point when enterprises start to consider the FDI is the moment, when some change of foreign variable occurs. Such turning point or trigger may be e.g. when a foreign country impose a tariff on an imported product. Thus, for a domestic enterprise it is not profitable to export to the foreign country anymore. In such case, a foreign enterprise faces three possible options: it can leave the market, license a foreign company to produce together or delegate it (to the foreign company) in order to produce the part of production which is not profitable to be produced anymore. As the third option, it can establish a subsidiary abroad including the possibility to come into possession of the production equipment and produce there itself, see Rasciute and Downward (2017).

Furthermore, for some countries and industries it is more common to be more engaged globally than for the others. Dunning (2002) asserts that it exists two different attitudes to explain why some countries and enterprises are more dominated by foreign enterprise's affiliates than the others. The two individual attitudes are namely: approach of locational economists and approach of industrial international economist. In terms of their attitude, locational economists focus on a place/location of company's production and they try to answer the question why they choose these places. The idea standing behind is that it must exist some certain reason why enterprises decide to acquire the foreign ownership of enterprises and they assume that such foreign ownership gives them some competitive advantage on the domestic market. The industrial economists do not deal with the same questions and rather focus on the reasons standing behind the choice of a particular invested industry. The typical questions they try to answer are which factors determine some enterprise to supply its output. To conclude, while the first attitude is more country oriented the second approach is rather industry oriented.

The factors according to which a company decides where it locates its production were the best described by Dunning (1988, 1993, 2002) and Dunning and Lundan (2008). These factors are partly external and partly internal which is the best described by Dunning's eclectic paradigm also known as OLI paradigm. This paradigm supposes that FDI will be located abroad only if three sets of factors exist simultaneously:

Ownership specific advantages (O) in a transnational company - specific advantages are synonym for competitive advantages of companies which are to make FDI. The bigger competitive advantage they possess, the more likely they are going to engage in FDI to foreign production. These specific advantages are e.g. possession of patents, technology or management skills.

Locational advantages (L) in home and host countries - refer to alternative countries or regions where the international production may be transferred as the economic system offers

convenient tax systems, low transport or production costs or is perceived as a legislatively well-protected market.

Internalisation advantages (I) - refer to net benefits of internalisation as cutting transaction costs, lowering risk of technology copying etc.

Franco et al. (2008) add that the OLI paradigm explains why (O) and how (I) a company makes its decision to go international and where (L) to invest.

Although, Dunning's OLI paradigm is probably the most respected and referred one it is not the only theoretical approach towards FDI determinants. Accuncao et al. (2011) summarized the theories explaining FDI determinants which can be found in table 3.

**Table 3: Other Theoretical Approaches Towards FDI Determinants**

Theoretical Approach	Determinants
Heckscher-Ohlin Model / MacDougall-Kemp Model	Higher return on investment, lower labour costs, exchange risk
Market imperfection	Ownership benefits (product differentiation), economies of scale, government incentives
Product differentiation	Imperfect competition
Oligopoly markets	Following rivals, responding to competition in domestic market
Product life cycle	Production function characteristics
Behaviour theory	Fear of loss of competitive edge, following rivals and increased competition at home
Internalisation	Market failures/inefficiencies
New theory of trade	Economic variables e.g. market size, transport costs or barriers to entry
Institutional approach	Political variables e.g. financial and economic incentives, tariffs and tax rate

Source: Accuncao et al. (2011), author's own adjustment

### 3. FDI Determinants in CEECs with Focus on Slovakia and Manufacturing Sector

Franco et al. (2008) state that, in general, host country or region FDI determinants can be divided into three categories according to motives of transnational corporations (TNC). These FDI determinants are as follows: policy framework for FDI, business facilitation and economic determinants. Policy framework for FDI basically involves variables as economic, political or social stability, rules influencing the market entry and market operations, standards for foreign affiliates, FDI policies i.e. especially M&A, *international agreements on FDI, privatization policy, trade and tax policy*. *Business facilitation includes investment incentives, hassle costs which are connected for instance with a level of corruption or administrative effectiveness, social facilities e.g. schools, investment and after investment services etc.* Economic determinants are divided into three individual categories by motives of transnational corporations:

- a. *Market-seeking: the main determinants of market-seeking TNCs are income per capita, market size, growth of the market and potential growth of the market, access to regional and global markets, preferences of a particular country consumers, market's structure etc.*
- b. *Resource/asset seeking: the main determinants of resource/asset seeking TNCs are accessibility and equipment of raw materials, workforce costs (preferably low) and skills, quality of physical infrastructure including telecommunication, other created assets as for instance clusters etc.*
- c. *Efficiency-seeking: the main determinants of efficiency-seeking TNCs are costs in general (including costs of all assets stated under resource/asset seeking) and membership in regional integration agreements (beneficial to the creation and establishment of regional corporate networks).*

In order to identify FDI determinants in CEECs with a focus on Slovakia and manufacturing sector, the literature devoted to the topic was researched. These were especially studies by: Ciurila (2007), Gausemann et al. (2011), Janicki and Wunnava (2004), Michalíková and Galeotti (2010), Resmini (2000), Rutkowski (2006), Srholec (2004) and Zamrazilova (2007).

Zamrazilova (2007) states that the most important FDI motives in general are geographical closeness, labour costs as well as the quality and availability of labour force, the level of regional integration maturity, the level of foreign trade liberalization, size of the host economy, the level of taxation, transport costs and governmental incentives. On the other hand, Srholec (2004) holds an opinion that an effort to decrease free trade barriers and an attempt to lower transport costs are not seen as main FDI localization factors.

Ciurila (2007) focused on determinant factors of FDI inflows in six CEECs and particularly gave an attention to four determinants namely productivity, unemployment rate, real exchange rate and the taxation environment. She estimated a Vector Error Correction Model (VECM) using quarterly data for the period 1997-2007 and concluded that the determinants of FDI inflows are different in each CEE country. She stated that it was proved that there was no relationship between the real exchange rate and FDI inflows in case of Hungary, Romania and Slovakia. On the other hand, in case of Bulgaria and the Czech Republic the exchange rate was proved as an important FDI determinant. In general, the unemployment rate was identified as a significant determinant of FDI inflows for all CEECs. The relationships between FDI inflows and other determinants were less clear than expected. Janicki and Wunnava (2004) dealt with FDI determinants for 8 CEECs (Bulgaria, Czech Republic, Estonia, Hungary, Poland, Romania, Slovak Republic and Slovenia) in 1997. They conducted regression analysis of several variables and revealed that the most important FDI determinants are namely: size of the host economy, host country risk, labour costs in the host country and openness to trade.

Gausemann et al. (2011) investigated five CEEC (Czech Republic, Hungary, Poland, Romania and Slovakia) in 1989-2009 with a focus on the following determinants: market access, costs advantages, scale economies, product diversification, access to technology as well as access to natural resources. Their analysis revealed that these countries are interesting for investors mainly due to their low costs of labours with a combination of highly-trained and skilled labour force as well as because of quick economic growth related to growing purchasing power of potential buyers. They assume that the investor's motives are mainly market and resource seeking. On the other hand, they suggest that technology seeking investors are not satisfied with the level of technology availability in these countries. Rutkowski (2006) estimated several regression models for thirteen CEEC and verified that investors were interested in these countries mainly because of their risen demand for skilled labour available for relatively low costs.

Resmini (2000) investigated the FDI determinants in CEECs at a sector level. Her research was particularly focused on the manufacturing sector divided into four groups according to the Pavitt taxonomy: supplier-dominated firms, scale-intensive firms, specialized suppliers and finally science-based firms. The similar classification but in different context was used e.g by Klapilová Krbová and Velčovská (2016). Resmini (2000) concluded that the FDI motives into classified manufacturing groups/industries significantly differed. She also stated that her work was the first attempt to analyse the determinants of FDI to manufacturing sector of CEECs. A similar study focused on a sector analysis, for one chosen country, was made for the Czech manufacturing industries in 2000-2007 by see Michalíková and Geleotti (2010). They used panel data of twenty-three sectors and applied an Ordinary Least Squares (OLS), Generalized Method of Moments (GMM) and Least Trimmed Squares Estimator (LTS) to reveal that in the Czech Republic, an amount of qualified labours with technical skills is still a comparative advantage as investors prefer industries with a high quality of labours. The profit per labour is another very important aspect which is monitored by foreign investors. To conclude they empirically proved that the higher number of qualified labours with technical skills, the higher FDI inflows into these sectors and the higher the profit per labour is, the higher FDI inflows are into individual industries.

Seemingly, the literature review revealed that the similar study about FDI determinants into Slovakian manufacturing sector has not been done yet, or at least has not been found in top journals, which is likely connected with the problem of data availability. As Slovakia and its FDI are currently highly discussed topic, the relevance of such study is very high.

#### **4. Conclusion**

The aim of the paper was to conduct a descriptive analysis of FDI determinants in CEECs with a focus on Slovakia and manufacturing sector. According to the professional literature devoted to the topic it was revealed that FDI determinants differ across CEECs. It seems that most authors share the opinion that CEECs attract foreign investors mainly due to labour costs and highly-trained and skilled labour force. So, it makes sense that unemployment rate was identified as an important FDI determinant. It seems that exchange rate is not an important FDI determinant in Hungary, Romania and Slovakia unlike in case of the Bulgaria and the Czech Republic. In general, it seems that foreign investor's motives are mainly market and resource seeking oriented therefore market size, economic growth connected with growing purchasing power of potential buyers are also taken into consideration when investors make their FDI decisions into CEECs. In terms of manufacturing sector in CEECs, it was revealed that not much work was done in this area although FDI motives into classified manufacturing industries significantly differed in CEECs. In the Czech Republic, in 2000-2007, quality of labours with technical skills as well as a profit per hour generated by a worker, were significant determinants of FDI inflows into manufacturing industries. Albeit, FDI decision is mainly sector oriented, a study dealing with determinants of FDI inflows into Slovakian sectors has not been done yet or at least was not found in top journals which indicated a literature gap.

#### **References**

- [1] Assunção, S., Forte R. and Teixeira. A. A. C. (2011). Location Determinants of FDI: A Literature Review. *Working Paper No 433*. Faculdade De Economia Universidade do Porto.

- [2] Ciurila, N. (2007). *Determinant Factors of Foreign Direct Investment Flows in Central and Eastern European Countries*. [online]. [cit.2018-03-07]. Available at: [http://www.opf.slu.cz/kfi/icfb/conf/papers/13\\_Ciurila\\_f.pdf](http://www.opf.slu.cz/kfi/icfb/conf/papers/13_Ciurila_f.pdf).
- [3] Dunning, J. H (1988). *Explaining International Production*. New York: Routledge.
- [4] Dunning, J. H (1993). *The Globalization of Business*. London: Routledge.
- [5] Dunning, J. H (2002). *Global Capitalism, FDI and Competitiveness: The Selected Essays of John H. Dunning Volume II*. Massachusetts: Edward Elgar Publishing Limited.
- [6] Dunning, J. H and Lundan, M. (2008). *Multinational Enterprises and the Global Economy*. Massachusetts: Edward Elgar Publishing Limited.
- [7] Franco, Ch., Tentocchini, F. and Marzetti, G. (2008). *Why do Firms Invest Abroad? An Analysis of the Motives Underlying Foreign Direct Investments*. [online]. [cit.2018-03-06]. Available at: <http://www.etsg.org/ETSG2008/Papers/Franco.pdf>.
- [8] Gauselmann, A., Knell, M. and Stephan, J. (2011). What Drives FDI in Central-Eastern Europe? Evidence from IWH-Micro Database. *Post-Communist Economies*, vol. 23, iss. 3, pp. 343-357.
- [9] Janicki, H. and Wunnava, P. (2004). Determinants of Foreign Direct Investment: Empirical Evidence from EU Accession Candidates. *Applied Economics*, vol. 36, pp. 505-509.
- [10] Klapilová Krbová, P. and Velčovská, S. (2016). Shopping Typology of Generation Y in selected European Union Countries. In: *Proceedings of the 3rd International Conference on European Integration 2016 : ICEI 2016 : [Part 1-2] : May 19-20, 2016, Ostrava, Czech Republic*. Ostrava: VŠB - Technická univerzita Ostrava, 2016. s. 443-454. ISBN 978-80-248-3911-0.
- [11] National Bank of Slovakia (2017a). Foreign Direct Investment [online]. [cit.2018-02-26]. Available at: <https://www.nbs.sk/en/statistics/balance-of-payments-statistics/foreign-direct-investment>.
- [12] National Bank of Slovakia (2017b). Priame zahraničné investície [online]. [cit.2018-02-26]. Available at: <https://www.nbs.sk/sk/statisticke-udaje/statistika-platobnej-bilancie/priame-zahranicne-investicie>.
- [13] Michalíková, E. and Galeotti, E. (2010). Determinants of FDI in Czech Manufacturing Industries between 2000-2007. *South East European Journal of Economics and Business*, vol. 5, iss. 2, pp. 21-35.
- [14] Sabol, T. and Hoskova, A. (2004). The Impact of Foreign Direct Investments on Performance of Manufacturing Enterprises in Slovakia. *Ekonomicky casopis*, vol 52, iss. 2, pp. 181-195.
- [15] Srholec, M. (2004). Přímé zahraniční investice v ČR: teorie a praxe v mezinárodním srovnání. Praha: Linde.
- [16] Tintin, C. (2013). The Determinants of Foreign Direct Investment Inflows in Central and Eastern European Countries: The Importance of Institutions. *Communist and Post-Communist Studies*, vol. 46, iss. 2, pp. 287-298.

- [17]Rasciute, S. and Downward, P. (2017). Explaining Variability in the Investment Location Choices of MNEs: An Exploration of Country, Industry and Firm Effects. *International Business Review*, vol. 26, iss. 4, pp. 605-613.
- [18]Resmini, L. (2000). The Determinants of Foreign Direct Investment in the CEECs. *Economics of Transition*, vol. 8, iss. 3, pp. 665-689.
- [19]Rutkowski, A. (2006). Inward FDI, Skilled Labour, and Product Differentiation in the CEEC. *Journal for East European Management Studies*, vol. 11, iss. 2, pp. 91-112.
- [20]Vlada (2015). Vláda SR podpísala investičnú zmluvu so spoločnosťou JAGUAR LAND ROVER [online]. [cit.2018-03-01]. Available at: <http://www.vlada.gov.sk/vlada-sr-podpisala-investicnu-zmluvu-so-spolocnostou-jaguar-land-rover/>.
- [21]Zamrazilová, E. (2007). Přímé zahraniční investice v české ekonomice: rizika duality a role trhu práce. *Politická ekonomie*, roč. 55, č. 5, s. 579-602.



## Sustainability of the EU Countries Measured by Selected Approaches

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### **Abstract**

*The selected indicators of the EU Sustainable Development Goal (SDG) indicator set were chosen for the Hierarchical Cluster Analysis (HCA) to classify the 28 EU countries, Norway and Switzerland according to their sustainability levels. Four clusters were created according to the indicator values in the initial period (primarily 2007) and the recent period (predominantly 2016). The changes in the assignment to the clusters also point out to the Sustainable Development (SD) path of countries. This can especially be seen in Slovenia. Cluster 1 is evaluated as the most sustainable cluster and cluster 2 as the least sustainable one. In the combination of the most important representative indicators in the social dimension, which are the People at risk of poverty or social exclusion (SDG1) and the Life expectancy at birth (SDG3), the poor results were shown by Bulgaria, Romania, Latvia and Lithuania (cluster 2 countries in the initial period) while the non-EU countries – Switzerland and Norway, included in cluster 1, are evaluated as the best performing countries.*

**Keywords:** European Union, hierarchical cluster analysis, sustainable development, sustainable development goals, people at risk of poverty or social exclusion

**JEL Classification:** C38, I32, F56

### **1. Introduction**

Sustainable development (SD) is a global challenge, which requires a progressive transformation of economies (Hediger, 2006). According to the most quoted definition of the World Commission on Environment and Development (WCED, 1987), SD is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. SD is a fundamental objective of the EU enshrined in its primary law (Treaty of Lisbon, 2007), governing all the EU's policies and activities. The EU formulated its Sustainable Development Strategy (SDS), i.e. long-term strategy dovetailing the policies for economically, socially and environmentally SD in 2001 (Adelle and Pallemarts, 2010). The external dimension was added to the EU SDS in 2002. The strategy was renewed in 2006 (see more in Drastichová (2014)). Although in this paper the focus is on the SD of countries, the SD must also be studied at the lower analytical levels. For example, the SD of Moravian-Silesian enterprises was investigated by Sucháček et al. (2018).

The 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs), adopted by the United Nations (UN) in September 2015, have given a new impetus to global efforts for achieving SD. The SDGs provide a recent policy framework worldwide for the issues that are crucial for the SD path, such as the framework towards ending all forms of poverty, fighting inequalities and tackling climate change. The EU, in coordination with its

Member States, is committed to support the implementation of the 2030 Agenda. The EU's answer to this Agenda is outlined in the 2016 European Commission's Communication (European Commission, 2016). Accordingly, the EU SDG indicator set replaced the EU SDS in 2017 (Eurostat, 2018). Allievi et al. (2011) used the HCA to group the EU-27 countries based on their performance measured by the EU Sustainable Development Indicators (SDIs). In comparison to that, the innovation of this paper lies in using the new EU SDG indicator set to compare the sustainability of the EU-28 countries together with other two developed countries, i.e. Norway and Switzerland.

The aim of the Paper is to cluster the EU countries, Norway and Switzerland according to their sustainability levels measured by the selected indicators included in the EU SDG indicator set. The indicators monitoring all three dimensions of the SD are included, but the special focus is on the crucial indicators in the social pillar of the SD. The level of sustainability is compared in the sample of 30 countries, i.e. the 28 EU countries, Norway and Switzerland, according to their assignment to particular clusters. The changes in the composition of clusters and the values of the indicators also reflect the SD path.

## **2. Data and Methodology**

In this section, the cluster analysis is introduced as the main methodology for the analysis (subsection 2.1). Subsequently, the EU SDIs and the EU SDG indicator set are described and the process of indicators selection is explained (subsection 2.2).

### **2.1 Cluster Analysis**

The cluster analysis is an exploratory data analysis tool which aims at sorting different objects (or cases, observations) into groups in a way that the degree of association between two objects is maximal if they are part of the same group and minimal otherwise (Mooi and Sarstedt, 2011). Hierarchical Cluster Analysis (HCA) is a method for the cluster analysis, which attempts to identify relatively homogeneous groups of cases, or variables, based on selected characteristics, using an algorithm that starts with each case (or variable) in a separate cluster and combines clusters until only one is left. HCA was applied to create clusters of analysed countries based on the indicator values of two periods: the most recent year, which is basically 2016, and the initial year 2007. Because not for all countries and indicators the data were available in this year, some modifications were adopted (described in Table 2). In the analysis, groups of countries are created while the Ward's method is used as the cluster method. The squared Euclidean distance was chosen from the measures for interval to specify distance. This is because the quantitative variables are used. From the available standardization methods, the Z scores were chosen because the variables included are measured in different units (Aldenderfer a Blashfield, 1984; Meloun a Militký, 2002; Řezánková, Húsek, Snášel, 2007).

### **2.2 Indicators Sets used for the Cluster Analysis**

As regards the previously used set of the indicators to measure the progress toward the EU SDS, i.e. the EU SDIs, ten indicators represent the headline indicators in the set of more than 130 SDIs. They provide an overall view of the EU's progress towards the SD in terms of the objectives and targets defined in the strategy. Because the EU SDS and its SDIs set were replaced with the EU SDG indicator set, related to the themes of the SDGs, the indicators from the latter were chosen for the cluster analysis. The EU SDG indicator set comprises 100 indicators that are structured along the 17 SDGs (see Table 1). Each goal contains 6 indicators primarily attributed to it, except for goals 14 and 17 which only have 5 indicators. There are also multipurpose indicators, i.e. 41 of the 100 indicators are used to monitor more than one

SDG. All indicators are grouped in sub-themes to underline interlinkages and emphasise different aspects of each SDG. Although the EU adjusted its framework for the SD measurement to the global agenda and the indicators are recently classified according to the 17 SDGs framework, a number of the particular indicators are the same or similar to those used under the framework of the EU SDIs. It means that the priority areas for the SD in the EU remained the same, but the global aspects of pursuing the SD path have been emphasised.

**Table 1: The UN 17 Sustainable Development Goals**

**Goal 1.** End poverty in all its forms everywhere; **Goal 2.** End hunger, achieve food security and improved nutrition and promote sustainable agriculture; **Goal 3.** Ensure healthy lives and promote well-being for all at all ages; **Goal 4.** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all; **Goal 5.** Achieve gender equality and empower all women and girls; **Goal 6.** Ensure availability and sustainable management of water and sanitation for all; **Goal 7.** Ensure access to affordable, reliable, sustainable and modern energy for all; **Goal 8.** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all; **Goal 9.** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation; **Goal 10.** Reduce inequality within and among countries; **Goal 11.** Make cities and human settlements inclusive, safe, resilient and sustainable; **Goal 12.** Ensure sustainable consumption and production patterns; **Goal 13.** Take urgent action to combat climate change and its impacts; **Goal 14.** Conserve and sustainably use the oceans, seas and marine resources for SD; **Goal 15.** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss; **Goal 16.** Promote peaceful and inclusive societies for SD, provide access to justice for all and build effective, accountable and inclusive institutions at all levels; **Goal 17.** Strengthen means of implementation and revitalise the Global Partnership for.

Source: Eurostat (2018)

Efforts were made to include the most important representative indicator of each SDG, except for the SDG14 and SDG15, while the SDG14 is not relevant for all the countries and for the SDG15 the data were not available in all the countries. However, subsequently nine indicators were chosen for which the data were available and simultaneously these indicators met the conditions required for the cluster analysis. This procedure is described more in detail at the beginning of section 3 but the indicators omitted due to noncompliance with the conditions necessary for the cluster analysis are also summarized in the last row of Table 2. The selection of the indicators was guided by their importance as representatives of the relevant SD pillars. The indicators serving as the headline indicators of the EU SDIs (the SDG1, 3, 8, and 12) and Europe 2020 strategy (the SDG1, SDG4, 9) were favoured. As regards the SDG8, the indicator chosen for the analysis, i.e. Real GDP per capita growth, is further considered. Efforts were also made to include all three basic pillars of the SD, together with the aspects of decoupling, represented by the SDG12 (analysis of decoupling and its relations to the SD can be found in Drastichová (2016, 2017)), and the institutional pillar, where the relevant SDG16 indicator was omitted due to noncompliance (see section 3). The SDG13 plays the crucial role in all three indicator sets, however, it was omitted due to the insignificance. Climate change is the crucial topic for the SD and requires special analysis (see more in Drastichová (2016b, 2017)). The priority was also given to the indicators reflecting the crucial aspects of the social pillar even if the topic in which these are included is not primarily social (the SDG7 indicator). Applying the criteria indicated above, the nine indicators included in Table 2 were chosen.

**Table 2: Indicators Chosen for the Cluster Analysis and Data Modifications**

SDG / Indicators used	Initial year	Recent year
SDG1: People at risk of poverty or social exclusion; Percentage	HR – 2010	-
SDG3: Life expectancy at birth total (Years)	-	All countries – 2015
SDG4: Early leavers from education and training total (% of population aged 18 to 24)	-	-
SDG5: Gender employment gap (percentage points (p.p.))	FR – 2014; CH – 2010	-
SDG7: Population unable to keep home adequately warm (% of population)	HR – 2010	
SDG8G: Real GDP per capita, Chain linked volumes (percent. change on previous period)		
SDG9: Gross domestic expenditure on R&D, All sectors (% of GDP)	CH – 2008	CH – 2012; FR – 2015
SDG11: Recycling rate of municipal waste (% of total waste generated)	-	IR – 2012; PT – 2014; GR, AT, RO, FI, UK – 2015;
SDG12: Resource productivity; PPS per kilogram		NO - 2015
SDG2: Area under organic farming; % of utilised agricultural area; SDG8U: Long-term unemployment rate; SDG10: Gini coefficient of equivalised disposable income; SDG13: Greenhouse gas emissions - tonnes per capita; SDG16: Corruption Perceptions Index; SDG17: Shares of environmental taxes in total tax revenues.		

Source: Eurostat (2018); author's elaboration

Note: PPS - Purchasing power standard

The first four indicators that are representatives of the SDG1, 3, 4, 5 reflect the social dimension of the SD together with the indicator representing the SDG7 although it is primarily related to the energy sustainability (see Table 1). The SDG8 and 9 represent the economic and the SDG11 and 12 the environmental dimension while Resource productivity is also the crucial decoupling indicator reflecting the efficiency of the resource use.

### 3. Results of the Analysis

At the beginning, all the 15 indicators described in Table 2 were considered to be included in the analysis. Before the analysis is carried out, the mutual dependence of the variables is examined. Particularly, the correlation and multicollinearity of the used indicators were tested. Due to the multicollinearity problem, the SDG16 and SDG10 indicators were omitted from the analysis. Meloun and Militký (2002) indicate that if the Variance Inflation Factor (VIF) is higher than 10, strong multicollinearity is present in data. The VIF statistics were below 10 in all the examined cases after omitting the above-indicated two indicators. Based on the One-Way ANOVA, not all the indicators included were significant by the creation of the clusters at the 0.05 significance level. Accordingly, the SDG2, SDG8U, SDG13 and SDG17 indicators (all insignificant at the 0.05 significance level in the initial period) are left out from the analysis (the SDG2 and the SDG13 indicators are insignificant in the recent period at the same significance level as well). All the nine remaining indicators were significant by the creation of clusters. The SDG3 had the highest influence in the initial period because the calculated F-statistic showed the highest level (32.808). The SDG9 showed the highest influence in the recent period (F-statistic = 19.483). In this set of nine indicators, the highest level of the

Pearson Correlation was shown between the SDG1 and the SDG7 in both periods (2007: 0.829; 2016: 0.819). The only other level of the Pearson Correlation exceeding 0.8, particularly 0.801, was reached between the SDG9 and the SDG11 in 2007. Accordingly, all the coefficients are below 0.9 while those and higher values indicate strong dependence (Sambandam, 2003). The classification of countries into four clusters in two years, which seems to be the optimal solution according to the created Dendrograms, is shown in Table 3.

**Table 3: The Composition of the Created Clusters**

	Cluster 1	Cluster 2	Cluster 3	Cluster 4
<b>Initial period</b>	BE, DK, DE, FR, LU, NL, AT, FI, SE, UK, NO, CH	BG, LT, LV, RO	CZ, EE, HR, CY, HU, PL, SL, SK	IR, GR, ES, IT, MT, PT
<b>Recent period</b>	BE, DK, DE, FR, LU, NL, AT, SL, FI, SE, UK, NO, CH	BG, LV	CZ, EE, IR, HR, LT, HU, PL, SK	GR, ES, IT, CY, MT, PT, RO

Source: author's elaboration

The results for the four clusters can be summarized as follows. The cluster 1 contains 12 countries in the initial period and 13 countries in the recent one. Slovenia was shifted from cluster 3, which mainly consists of the transitive economies, i.e. the new member countries, to cluster 1. Some of the new member countries are also included in cluster 2, especially those less developed. Latvia and Romania were shifted to cluster 3 and cluster 4 respectively in the recent period. Cluster 4 contains all four Southern economies and Malta in both years together with Ireland in the initial year and Cyprus and Romania in the recent year. Ireland was shifted from cluster 4 to cluster 3 in the recent year and conversely, Cyprus was shifted from cluster 3 to cluster 4 in the recent year.

Ireland showed significant increase in the Real GDP per capita growth rate (SDG8), Resource Productivity (SDG12) as well as in the share of Population unable to keep home adequately warm (SDG7). On the other hand, the representative indicators of the SDG4 and the SDG5, reflecting the crucial social aspect, where the poorest performance is shown by cluster 4, decreased significantly, which indicates the improvements. This should also be the reason why Ireland was shifted from cluster 4. In Cyprus, almost all the social indicators showed the improvement, i.e. the SDG3, 4, 5 and 7, the SDG11 and 12 indicators increased as well, the SDG9 indicator increased only very slightly. The GDP growth rate remained the same (SDG8). However, the SDG1 indicator increased and the SDG11, 9 and 7 indicators still show the poor performance. Slovenia showed the relatively high increases in almost all the indicators, slight increase in the SDG7 indicator (0.6 p.p.) and the relatively high drop in the growth rate of the real GDP (SDG8) but also Gender employment gap (SDG5). The increase in the SDG1 and SDG4 indicators also indicates deterioration of social conditions. Both Latvia and Romania achieved the relatively high drop in the share of People at risk of poverty or social exclusion (SDG1), the share of Population unable to keep home adequately warm (SDG7), Gross domestic expenditure on R&D (SDG9) and Real GDP per capita growth (the SDG8) slowed down as well. Both increased Life expectancy at birth (SDG3), especially Latvia. The SDG4 and 5 indicators significantly decreased in Latvia, but showed one of the highest increases in Romania. Accordingly, the poor performance of the cluster 4 countries in these indicators is also likely to be the reason why Romania was shifted to cluster 4. Recycling rate of municipal waste (SDG11) also increased significantly and Resource productivity (SDG12) slightly in both countries.

In Table 4, the Descriptive Statistics of clusters are included. Cluster 1 showed highest means for the SDG3, 9, 11 and 12 in both years and the lowest means for the SDG1, 7 in both years and the SDG8 in the recent year. This indicates the highest average Life expectancy at birth, Gross domestic expenditure on R&D, Recycling rate of municipal waste together with the highest Resource productivity. On the other hand, the share of People at risk of poverty or social exclusion, Population unable to keep home adequately warm together with Real GDP per capita growth showed the lowest average levels (the latter only in the recent year). Cluster 2 showed the lowest means for the SDG3, 5, 9, 12 and 11 (the latter in the initial period) and the highest mean for the SDG1, 7 and 8. It means that it has the lowest average Life expectancy at birth, Gender employment gap, Gross domestic expenditure on R&D, Resource productivity together with the lowest Recycling rate of municipal waste in the initial year. Cluster 3 showed the lowest mean for the SDG4, i.e. the lowest average share of Early leavers from education and training in both years. Cluster 4 showed the highest means for the SDG4 and 5 indicators and the lowest mean for the SDG8 (in the initial period) and the SDG11 (in the recent period).

**Table 4: Descriptive Statistics for the Four Clusters in the Initial and Recent Period**

Ind (Cl)	Mean (Rec)	St. D. (Rec)	Mean (In)	St. D. (In)	Ind (Cl)	Mean (Rec)	St. D. (Rec)	Mean (In)	St. D. (In)
12(1)	2.48	1.07	1.97	0.75	12(2)	1.10	0.57	0.70	0.23
11(1)	49.87	7.82	46.61	10.08	11(2)	39.90	11.46	8.38	8.66
9(1)	2.43	0.61	2.25	0.63	9(2)	0.76	0.03	0.58	0.16
8(1)	1.12	0.81	2.98	1.60	8(2)	4.20	0.71	9.93	2.10
7(1)	3.07	1.70	4.56	4.29	7(2)	34.25	7.00	36.00	21.65
5(1)	7.61	2.74	11.01	4.07	5(2)	4.60	3.82	10.18	2.29
4(1)	7.90	2.10	12.08	3.15	4(2)	9.30	6.36	13.90	4.19
3(1)	81.65	0.76	80.24	0.95	3(2)	74.65	0.07	71.90	1.33
1(1)	18.34	1.88	17.88	2.59	1(2)	35.25	7.28	42.88	14.10
12(3)	1.54	0.52	1.04	0.23	12(4)	2.08	1.13	1.44	0.58
11(3)	30.78	7.81	11.23	7.49	11(4)	22.59	13.16	21.83	10.74
9(3)	1.05	0.37	0.87	0.38	9(4)	0.90	0.37	0.97	0.32
8(3)	3.00	0.77	5.74	3.19	8(4)	2.64	1.81	2.28	0.94
7(3)	6.70	2.83	11.86	11.09	7(4)	17.53	8.07	14.68	13.76
5(3)	11.43	4.31	14.98	3.72	5(4)	16.06	7.19	24.78	9.79
4(3)	7.70	3.19	7.95	4.13	4(4)	14.11	5.47	23.85	10.04
3(3)	77.55	2.03	75.98	2.30	3(4)	80.97	2.72	80.22	0.91
1(3)	23.08	5.18	24.55	6.68	1(4)	29.31	6.29	24.23	2.93

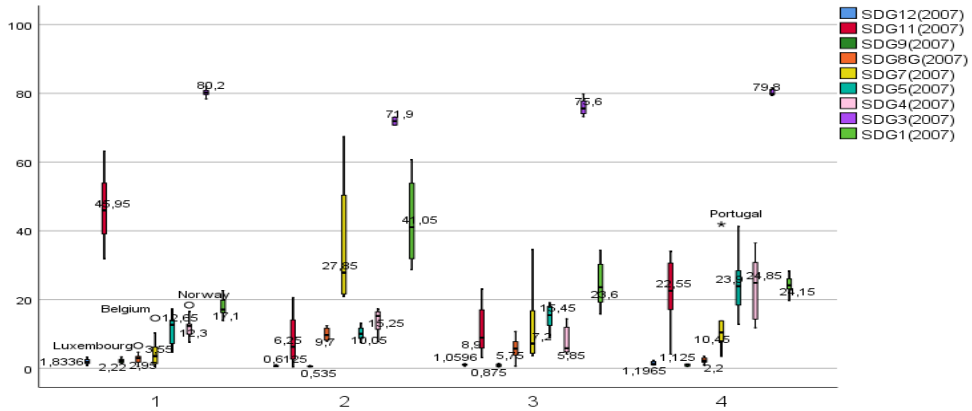
Source: author's elaboration

Notes: Ind – Indicator, Cl – cluster; In – initial period, Rec – recent period; St. D. - Standard Deviation.

The following two Boxplots displayed by Figure 1 and 2 show the distribution of data for nine indicators in the four clusters based on the five number summary: minimum, first quartile, median, third quartile, and maximum. By means of them, the results included in Table 4 are extended. In both periods, cluster 1 showed the lowest medians and means for the SDG1, represented by the People at risk of poverty or social exclusion indicator, while the cluster 2 showed their highest levels. For the SDG3 - Life expectancy at birth indicator, the opposite is true. Cluster 1 achieved the highest means and medians in both periods (except for the slightly higher median in cluster 4 in the recent year, but Romania represents the extreme outlier showing the lowest indicator value) and cluster 2 showed the lowest levels. These results,

shown more in detail in Figure 3 and 4, indicate the highest sustainability in the crucial social indicators in cluster 1 and the lowest sustainability in cluster 2.

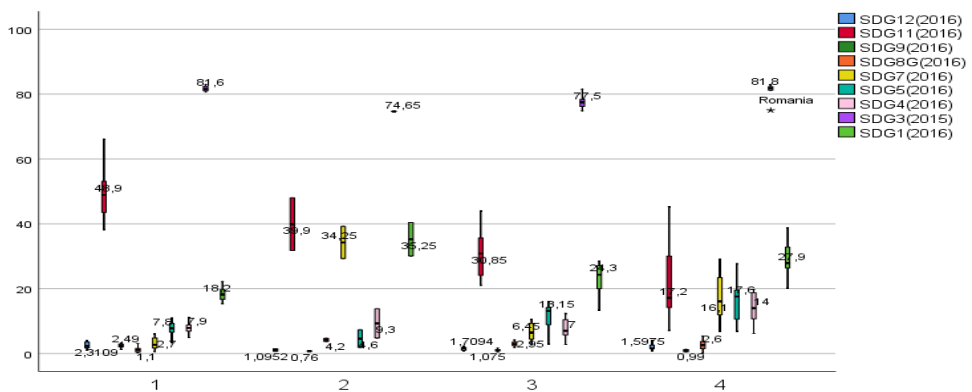
**Figure 1: Boxplot for the Initial Period**



Source: author’s elaboration

There are additional two crucial social indicators, representing the SDG4 and 5. For the SDG4, represented by Early leavers from education and training indicator, the highest medians and means are typical of cluster 4 and the lowest ones of cluster 3 in both years. The second lowest levels are shown by cluster 1 again. Accordingly, the cluster 3 can be regarded as the second best performing in the crucial social aspects. For the SDG5 representative indicator, i.e. Gender employment gap, the lowest means and medians were achieved by cluster 2, the second lowest by cluster 1, and the highest levels by cluster 4 in both periods. So, in this social aspects the cluster 4 showed the poorest performance again, but the good performance was achieved by cluster 2 and 1.

**Figure 2: Boxplot for the Recent Period**



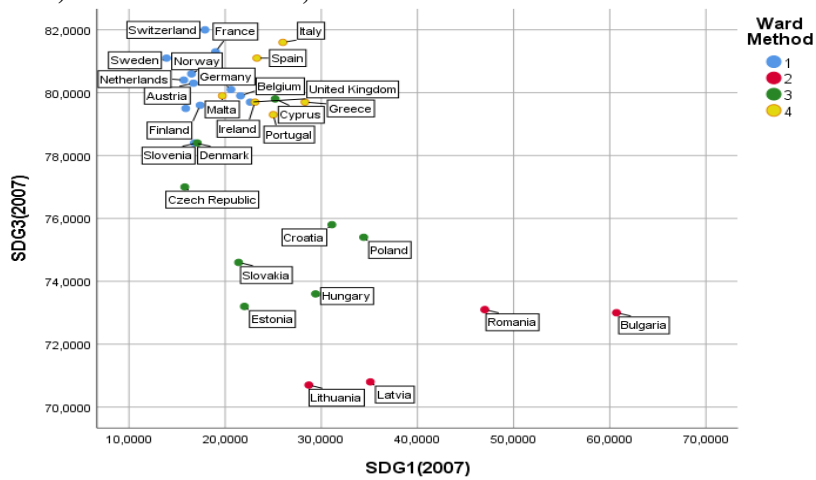
Source: author’s elaboration

Cluster 2 showed the highest medians and means for the SDG7 represented by Population unable to keep home adequately warm in both periods while the lowest ones were achieved by cluster 1. This indicator representing the socio-energy aspects indicates the best average performance of cluster 1, followed by cluster 3. Real GDP per capita growth as the

representative of the SDG8 showed the highest means and medians in cluster 2 in both periods and their lowest levels in cluster 4 in the initial and in cluster 1 in the recent period. The second highest means and medians are typical of cluster 3 in both periods. This indicator representing the economic pillar of the SD shows that the majority of less developed new member countries grow faster, while the developed economies of cluster 1 and the Southern economies included in cluster 4 (except for Spain in 2016) often show slower growth rates. Gross domestic expenditure on R&D represents the SDG9 while the best results, i.e. the highest medians and means, are clearly achieved by cluster 1 in both periods. The lowest levels are typical of cluster 2 in both periods. In the initial year, the second best performance is shown by cluster 4, but in recent year in cluster 3. Recycling rate of municipal waste, reflecting the SDG11 and the environmental pillar of the SD, shows the highest medians and means in cluster 1. The lowest levels were shown in cluster 4 in the recent period and in cluster 2 in the initial period. As the composition of cluster 2 changed, the medians and means increased significantly from the lowest to the second highest level. On the one hand, the rates increased in the all initial cluster 2 countries, on the other hand, they are still relatively lower in Latvia and Romania, which were shifted to cluster 3 and 4 respectively. The last indicator - Resource productivity is the representative of the SDG12. The highest means and medians are also achieved in cluster 1 and the lowest ones in cluster 2 for both periods. The second highest means and the median in the initial period are typical of cluster 4. Recently the median for cluster 3 is higher.

Due to the special focus of the analysis on the social dimension of the SD, Figure 3 and 4 show the relations between the crucial representatives, i.e. of the SDG1 and of the SDG3 for the clusters in the initial year (Figure 3) and in the recent year (Figure 4).

**Figure 3: People at Risk of Poverty or Social Exclusion (SDG1) and Life Expectancy at Birth (SDG3) in the Four Clusters, 2007**



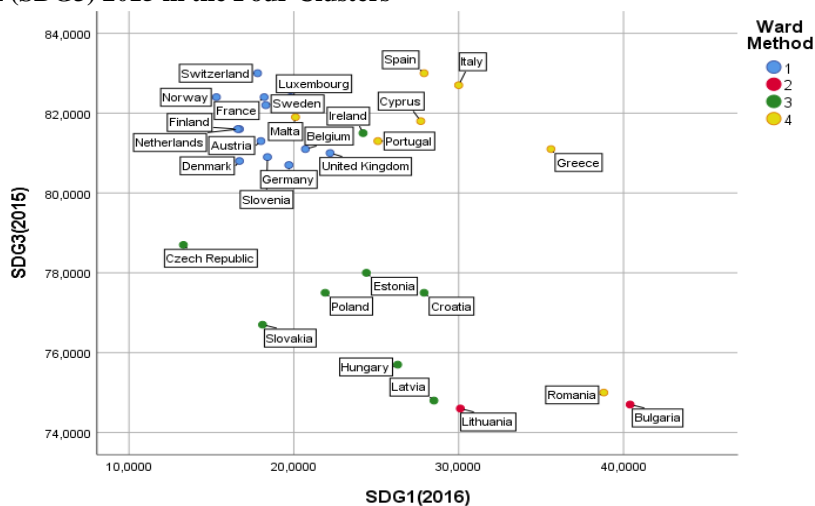
Source: author’s elaboration

In both years, the best results were achieved by cluster 1 showing the relatively lowest People at risk of poverty or social exclusion shares together with the relatively highest Life expectancy at birth. Cluster 2 is unambiguously the worst performing group in these indicators showing the relatively lowest Life expectancy at birth levels and the relatively highest People at risk of poverty or social exclusion shares. For the majority of the cluster 4 countries the Life expectancy at birth is also relatively high. It showed the second highest means in both periods, the second highest median in the initial and the highest median in the recent period while



Romania represents the extreme outlier. This is also connected with the highest standard deviation for this indicator in cluster 4 in the recent period (see also Figure 2). As regards the People at risk of poverty or social exclusion shares of cluster 4, these are often similar to those of cluster 3 (the mean is higher in cluster 4 in the recent period but slightly lower in the initial period, the medians are higher in cluster 4). However, the medians and means of Life expectancy at birth of cluster 3 are lower than those of cluster 4. As regards the particular countries, the poor results were shown by Bulgaria, Romania, Latvia and Lithuania (the initial cluster 2 countries) while the non-EU countries – Switzerland and Norway, included in cluster 1, can be evaluated as the best performing countries.

**Figure 4: People at Risk of Poverty or Social Exclusion (SDG1) 2016 and Life Expectancy at Birth (SDG3) 2015 in the Four Clusters**



Source: author's elaboration

To sum up, the analysis showed that the average best performance in the selected sustainability indicators was shown by cluster 1, consisting predominantly of the more developed EU economies together with Switzerland and Norway. The two latter, especially Switzerland, together with Sweden, can be regarded as the best performing countries at all. The poorest performance is shown by cluster 2 where the less developed new EU member countries are included. They also showed highest growth rates of the real GDP (the SDG8). Nevertheless, the initial four cluster 2 countries still show poor performance in a number of indicators. Cluster 4, consisting of the all Southern countries, several new member countries and Ireland in the initial period, can be regarded as the second worst performing cluster.

#### 4. Conclusion

The aim of the Paper was to cluster the EU countries, Norway and Switzerland according to their sustainability levels measured by the selected indicators included in the EU SDG indicator set. Overall, cluster 1 containing the majority of the most developed EU countries, Switzerland and Norway, can be evaluated as the most sustainable cluster in both periods while cluster 2, consisting of the selected less developed EU countries, showed the poorest performance. Between 2007 and 2016, the composition of cluster changed due to the changes in the indicators values. Slovenia was shifted from cluster 3, which consists of the transitive economies (the new member countries), to cluster 1. Latvia and Romania were shifted from cluster 2 to cluster 3 and cluster 4 respectively. Cluster 4 contains all four Southern economies

and Malta in both years together with Ireland in the initial year and Cyprus and Romania in the recent year. Ireland was shifted to cluster 3 in the recent year and conversely, Cyprus was shifted from cluster 3 to cluster 4 in the recent year. It is difficult to assess the changes in the composition of the clusters in relation to the SD path of countries. From the above indicated changes, the shift of Slovenia to cluster 1 is most likely to be the positive change towards the SD path.

In the crucial indicators representing the social dimension of the SD, the best results were achieved by cluster 1 showing the relatively lowest People at risk of poverty or social exclusion (representing the SDG1) shares together with the relatively highest Life expectancy at birth (representing the SDG3). Cluster 2 is unambiguously the worst performing group in these indicators showing the relatively lowest Life expectancy at birth levels and the relatively highest People at risk of poverty or social exclusion shares. The indicator representing the socio-energy aspects, i.e. the share of Population unable to keep home adequately warm (SDG7), indicates the best average performance of cluster 1, followed by cluster 3 and cluster 2 showed the lowest performance. There are additional two crucial indicators reflecting the social dimension of the SD. For the SDG4, represented by Early leavers from education and training indicator, on average, the best results were achieved in cluster 3, followed by cluster 1 and worst results in cluster 4. The poorest average performance in cluster 4 is also typical of Gender employment gap (representing the SDG 5) while the best performance was achieved by cluster 2, followed by cluster 1. For the economic dimension of the SD, two crucial aspects were chosen. The SDG8 representative, i.e. Real GDP per capita growth, showed the highest average rates in cluster 2, followed by cluster 3, while the relatively lower rates are typical of cluster 1 and cluster 4. It means that the majority of less developed new member countries grow faster, while the developed economies of cluster 1 and the Southern economies included in cluster 4 often show slower growth rates. On the other hand, average Gross domestic expenditure on R&D representing the SDG9 are unambiguously highest in cluster 1 and lowest in cluster 2. The latter two indicators, reflecting the environmental pillar of the SD and decoupling aspects, represent the SDG11 and the SDG12 respectively. The best performance in both of them, i.e. in Recycling rate of municipal waste (the SDG11) and Resource productivity (SDG12) is achieved in cluster 1. Resource productivity is lowest in cluster 2 but the Recycling rate increased significantly in all the initial cluster 2 countries and also due to the change in composition of cluster 2, the lower average rate is recently shown by cluster 4.

Overall, cluster 1 can be evaluated as the most sustainable cluster in both periods while cluster 2 showed the poorest performance. However, in some important aspects of the SD, cluster 3 also achieved high performance while cluster 4 often showed poor performance. Between 2007 and 2016 the composition of cluster changed. Norway, Switzerland and Sweden can be evaluated as the best performing countries while the four cluster 2 countries from the initial period can be evaluated as the countries with the poorest performance in relation to sustainability. The positive development in the indicators indicates the shift towards the SD path. To achieve the SD path, the important challenge is to change the quality of the economic growth. Particularly, the fast growing (often cluster 2 and cluster 3) countries should achieve decoupling, i.e. decrease their environmental burden while increasing their economic product. The significant attention should also be paid to the social aspects of development.

## References

- [1] Adelle, C. and Pallemarts, M. (2009). *Sustainable Development Indicators. An Overview of Relevant Framework Programme Funded Research and Identification of Further needs in view of EU and International Activities* [online]. [cit.2018-01-30]. Available at: [https://ieep.eu/archive\\_uploads/443/sdi\\_review.pdf](https://ieep.eu/archive_uploads/443/sdi_review.pdf).

- [2] Aldenderfer, M. and Blashfield, R. (1984). *Cluster analysis*. Beverly Hills: Sage Publications.
- [3] Allievi, F., Luukkanen, J., Panula-Ontto, J. and Vehmas, J. (2011). Grouping and Ranking the EU-27 Countries by their Sustainability Performance Measured by the Eurostat Sustainability Indicators. In: Lakkala, H. and Vehmas, J. (eds.). *Proceedings of the Conference "Trends and Future of Sustainable Development" 9-10 June 2011, Tampere, Finland*. Turku: Finland Futures Research Centre, pp. 9-20.
- [4] Drastichová, M. (2017). Decomposition Analysis of the Greenhouse Gas Emissions in the European Union. *Problemy Ekorozwoju*, vol.12, iss. 2, pp. 27-35.
- [5] Drastichová, M. (2016a). Decomposition Analysis of the Material Consumption in the European Union. *Ekonomický Časopis*, vol. 64, iss. 7, pp. 646-665.
- [6] Drastichová, M. (2016b). Climate change in the Sustainable Development Context with the focus on the EU. In: Kovářová, E., Melecký, L. and Staničková, M. (eds.) *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB – Technical University of Ostrava, 2016, pp. 149 – 160.
- [7] Drastichová, M. (2014). Monitoring Sustainable Development and Decoupling in the EU. *Ekonomická revue - Central European Review of Economic Issues*, vol. 17, iss. 3, pp. 125 – 140.
- [8] European Commission (2016). *Next steps for a sustainable European future. European action for sustainability*. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions COM(2016) 739 final [online]. [cit.2018-01-24]. Available at: [https://ec.europa.eu/europeaid/sites/devco/files/communication-next-steps-sustainable-europe-20161122\\_en.pdf](https://ec.europa.eu/europeaid/sites/devco/files/communication-next-steps-sustainable-europe-20161122_en.pdf).
- [9] Eurostat (2018). *Sustainable development indicators* [online]. [cit.2018-01-20]. Available at: <http://ec.europa.eu/eurostat/web/sdi>.
- [10] Hediger, W. (2006). Weak and Strong Sustainability, Environmental Conservation and Economic Growth. *Natural Resource Modeling*, vol. 19 iss. 3, pp. 359-394.
- [11] Meloun, M. and Militký, J. (2002). *Kompendum statistického zpracování dat*. Praha: Academia.
- [12] Mooi, E. and Sarstedt, M. (2011). Cluster Analysis. In: Mooi, E. and Sarstedt, M. (eds.). *A Concise Guide to Market Research*. Verlag Berlin Heidelberg: Springer, pp. 237-284.
- [13] Řezanková, H., Húsek, D. and Snášel, V. (2007). *Shluková analýza dat*. Praha: Professional Publishing.
- [14] Sambandam, R. (2003). Cluster Analysis Gets Complicated. Collinearity is a natural problem in clustering. So how can researchers get around it? *Marketing Research*, vol. 15, iss. 1, pp. 16–21.
- [15] Sucháček, J., Štverková, H. and Kašík, J. (2018). Czech Machinery Cluster and Its Role in Sustainable Development of Moravian-Silesian Enterprises during the Post-Transformation Era. *Sustainability*, vol. 10, iss. 2, pp. 1-14.
- [16] WCED (1987). *Report of the World Commission on Environment and Development: Our Common Future*. Oxford: Oxford University Press.

## Position of the Eurozone Within International Monetary Systems

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### **Abstract**

*Since the collapse of the Bretton Woods system, the international monetary systems have undergone significant dynamic changes. This period was characterized not only by gold demonetization, currency crises, but the globalization of financial markets. The aim of the article is to evaluate the position of the Eurozone in the international monetary systems as it gradually evolved over time. The results of the analysis revealed, on the one hand, the growing share of the EMU's common currency euro in the international monetary systems. On the other hand, the share of US dollar does not detract from only the euro but also the currencies of emerging markets. In particular, the Chinese renminbi can play a more important role in the future than it has played so far.*

**Keywords:** *currency crisis, EMU, foreign exchange reserves, government debt to GDP, monetary system*

**JEL Classification:** *E42, F31, F36*

### **1. Introduction**

The collapse of Bretton Woods system in 1973 changed the international monetary system much more than a modification of the gold standard in the 20s of the 20th century or restoration of currencies convertibility in 1958 (Eichengreen, 2008). Reasons for reforms of the international monetary system were paradoxically caused by a growth of world economies and development of international trade where US dollar played the role of an acceptable mean of payment. And therefore around 1964 foreign debts in dollars exceeded its golden cover guaranteed by the Federal Reserve System of the United States of America (Sedláček, 2008). Internal and external problems of the USA contributed to the reform of the post-war international monetary system. The external problems were caused mainly by the outflow of dollars from the USA. This *export of dollars* was caused mainly by investments of American companies in Europe. It was a major factor causing deficit of US payment balance (excluding official foreign exchange reserves account). Another factor negatively affecting the deficit of current account of the USA was the inflation growth caused by increased pressure on the US public spending. Roots of these internal problems of the USA can be linked to high cost of the war in Vietnam, but also to generous social programs as well.

At the beginning of 1971 the central banks were trying to ward off the end of the Bretton Woods system by exchange rate interventions. From January to March of the same year they bought US dollars in a total value of up to 5 billion USD. The aim was to prevent the weakening of the US dollar. In August 1971 the USA officially responded by series of measures. As mentioned above, American president Richard Nixon announced the cancellation of convertibility of foreign dollars reserves for gold. Most imported goods were

additionally imposed by a 10% import tax and a principle of *buying American goods* started to enforce. There was also a wage freeze for a period of 90 days. The external imbalance was solved primarily by pressure towards revaluation of other currencies parity against the US dollar. At the same time there was an effort to reduce military spending which should be transferred to a large extent on other states of military agreements (Germany, Japan). A significant effort of the USA was also general effort to reduce the role of gold in the international monetary system.

Except the war period and post-war reconstruction the aim of the monetary politics was also to maintain a fixed exchange rate. However, until March 1973 the attempts of recovery of the fixed exchange rates, for example in a form of Smithsonian Agreement, were not successful and the main world currencies started to float.

This transition from the fixed to the floating exchange was a result of increasing international capital mobility. During the period of functioning of Bretton Woods system capital controls provided isolation from pressures in the payment balance for governments that have felt need to perform a direct monetary policy for achieving other goals. Actually the capital controls offered a space for a regular adjustment of fixed, however, adjustable exchange rates. Policymakers therefore could consider adjusting of parities without causing destabilizing tidal wave of international capital. However the effectiveness of controls has been disrupted for years. Renewal of the international financial market following the Great Depression in 30s and after the war was gradual. With the restoration of currency convertibility it has become more and more difficult to distinguish between purchases and sales of foreign currencies binding to common or capital accounts. The market participants have managed to find new and more sophisticated ways of circumventing barriers imposed by the international capital flows.

The situation has become more and more problematic for governments and central banks. The mere suggestion that a country is considering a parity change, for example, could cause a massive outflow of capital which in its conclusion of monetary authority discouraged such change to be ever done. In the world of high capital mobility the maintenance of parity requires unprecedented amount of interventions on the international foreign exchange markets and also considerable international support. The transition to floating exchange rates which followed the collapse of Bretton Woods's monetary system was a leap into the void. Particularly the IMF, which functioning was vitally linked to the post-war monetary system, did not report to this transition voluntarily.

## **2. Period after Collapse of Bretton Woods System**

In the period after the collapse of the Bretton Woods system, which persists to nowadays, the exchange rate regime is dependent on the choice of central authority of a given state. It is therefore on the shoulders of individual governments or monetary authorities which exchange rate to choose and be able to resist potential risk of currency crisis. Nowadays it is possible to meet several exchange rate systems that can be divided into two main groups, namely a fixed exchange rate regime and a floating exchange rate regime.

The fixed exchange rate regime may also take a form of a fixed exchange rate without oscillating band (PEG), a fixed exchange rate with oscillating band of at least  $\pm 1\%$  around the central parity (horizontal band), a fixed exchange rate with a regular shift (crawling peg), a fixed exchange rate with a regular shift with oscillating band of at least  $\pm 1\%$  around the central parity (crawling band) and Monetary Affairs (currency board). In the case of the floating exchange rate the system can be divided into so-called clean and managed floating.

## 2.1 Demonetization of Gold

Reform efforts of the international monetary system after the World War II consisted mainly in the rescue of the Bretton Woods monetary system. Ex post, these efforts can be evaluated as unsuccessful if their primary aim was to prevent the collapse of the Bretton Wood system. However the contemporary view of many experts and economists see the collapse of the Bretton Woods system via different optics. Thus there is not general agreement about the usefulness or negative impact of the end of the post-war monetary system that was made via the transition of a significant part of the global economy from a modified gold standard for demonetization of gold.

New York University Professor Nouriel Roubini considers the gold standard as one of the causes of the Great Depression of the 30s of the last century (Němec and Pravec, 2013). He pointed to the inability of the central banks in the position of lender of last resort. From the Czech economists an opinion of Professor Revenda (2010) can be mentioned who points to a fundamental lack of golden metal: *If we took all the gold reserves in all central banks – it is over 31, 000 tons – and appreciate them by dollar price, the overall amount would not cover the total amount of money in the USA. Americans would need another 42,000 tons to achieve full coverage of its cash reserves.* It is also necessary to realize that the gold standard is dependent on the market price of gold which is highly volatile.

**Figure 1: % of Dollar Backed by Gold (Market Value of Federal Reserve's Gold)/ (Balance of the Federal Reserve)**



Source: The Market Oracle (2018)

Contrary the proponents of the gold standard demand stabilization of the amount of money in circulation. Opponents counterbalance here (Revenda, 2010) by pointing to a fact that with the economy growth the requirements for additional liquidity are increasing which are ultimately decided by an offer of cashless bank loans, see Figure 1. This situation caused a steady amount of money in the economy would cause deflationary pressures, which would in turn lead to a reduction in economic output (typical example is Japan). Indeed, the European Union is in a similar situation at the moment. Economic policy mix is represented by a strong fiscal restrictions, coupled with an extremely loose monetary policy. Return to the gold standard in this situation would not be certainly an adequate solution for starting an economic growth in the EU environment.

## 2.2 Currency Crisis

The post-Bretton Woods period is also characterized for its high frequency of currency crisis, especially in countries of developing world. These crisis struck mainly in South Africa and Zimbabwe (8 crisis), Argentina (7 crisis), Pakistan and Peru (in both countries 6 crisis). Indonesia, Nigeria, Mexico and Turkey have faced five crises totally. A smaller number of crises were recorded in industrialized countries. These were mainly in New Zealand which underwent five crises and Spain that was exposed to four crises. The most serious currency crises include mainly the crisis of the European monetary system which took place in 1992-1993, the crisis in Mexico (1994-1995) and the crisis in Southeast Asia which affected mainly Thailand, Philippines, Malaysia, Indonesia and South Korea (year 1997). Australian dollar experienced a currency crisis in 1998, as well as Russian ruble. A year later a crisis in Brazil broke out (1999) and then on the same continent in Argentina in 2002, for details see Sedláček (2008) and Krugman (2009).

The IMF in individual countries and regions reacted on the above mentioned crises in different ways. In the case of the Mexican crisis it solved the situation co-ordinately in cooperation with the US Ministry of Finance and the Bank for International Settlements (BIS). Financial assistance program was provided in a total value of 50 billion USD, where the IMF contributed with 20 billion USD. Despite this high financial help the fund was not able to solve the crisis on the capital account of the payment balance of Mexico which was triggered by liberalization of international capital movements. The fund was also not able to react to fundamental imbalance in the Mexican economy which did not provide it with sufficient information about its economic development. After the announcement of statistics on international foreign exchange reserves and foreign debt there was a strong reaction from investors and overspill of financial costs of the crisis to other countries of Latin America, *the tequila effect*. The lessons of the crisis lied thus in a proposal for a greater information transparency about economic development in individual economies, stronger supervision and creation of sufficient financial programs.

The role of the IMF in solving the Asian crisis has also been very significant. The Fund provided financial assistance to Indonesia, the Republic of Korea and Thailand in a total value of 35 billion USD. Many recommendations by the IMF for the area of macroeconomic policies flowed to the affected economies. It was particularly tightening of currency and fiscal policy, in a sphere of financial and business sector the Fund then proposed to implement structural reforms. The lesson of the crisis was the Fund self-reflection which stated that it is necessary to strengthen the supervision, mainly in the sphere of exchange rate policy and the financial sector. Even in this case the Fund failed to response immediately due to the lack of data transparency from the affected economies. The IMF response to the crisis situation in the Asian region was the creation of two new credit lines. In 1997 Supplemental Reserve Facility (*Supplemental Reserve Facility*, SRF) for countries affected by a sudden loss of market confidence was introduced. In 1999 Contingent Credit Line (*Contingent Credit Line*, CCL) was established. It was not primarily designed for countries affected by the crisis, but those which could be affected by panic among investors as well. Sedláček (2008) points to an important moment which happened in the context with the Asian crisis. In January 1998 it was agreed to increase the membership quotas (11th general review of quotas) by 45% and in December of the same year an agreement, New Arrangements to borrow (*New Arrangements to Borrow*, NAB) increasing the fund sources by 34 billion SDR, was concluded. As the Asian countries felt offended, in relation to lower decision-making powers arising from their voting share in the IMF, a discussion on membership interest change the IMF corporate governance.

Common symptoms of a new generation of financial crises of the 90s of the 20<sup>th</sup> century can be traced in a comparable maturity of affected economies, strength and crises speed, their economic and social costs, moreover, but also in external manifestations in relation to foreign countries, for details see (Sedláček, 2008). The financial crises affected mainly new emerging market economies that were recruited from the developing part of global economy. High economic and social costs resulted in the loss of retirement, decline in production and increased unemployment. In relation to foreign countries, which is expressed by financial flows and transfers in the payment balance, there were movements of crisis manifestations from a current account to a capital account.

When comparing the frequency of crises across individual international monetary systems it is obvious that in time there is an increasing frequency of currency crises. The smallest number of crises and their smallest frequency was recorded in the period of the gold standard, while the most crises as to their frequency, can be seen in the post-Bretton Woods period.

Helísek (2004) as the most common causes of the growing number and frequency of crises states decreasing capital regulation, high capital mobility, decline of exchange regulation, reducing of transaction costs and the impact of bank crises on the currency markets.

The dependence of increased frequency of currency crises to declining capital and exchange regulations is however not so clear. The period of the gold standard was for example typical for the absence of capital regulation and capital movements took on considerable dimensions despite of it the crises frequency was much lower. An important determinant of the increasing frequency of the currency crises is a technological progress which enabled a smoother functioning of exchange markets or decreasing transactional costs of currency speculation. A frequent cause of the crises can be also disorders in a banking system which will lead to the bank crisis itself. It can then simultaneously coexist alongside the currency crisis (*so called twin crisis*).

### **2.3 Financial Globalization**

Not only the current global financial crisis, which will be discussed below, but also currency crises are denoted as the globalization crises. There are contrary views on positive or negative benefits of globalization in general. Proponents of this global process highlight mainly its positive effect on a growth of freedom and economic prosperity, technological boom, but also increase in opportunities for innovation, for details see (Stuchlíková, 2009). The controversial moment is then the influence of globalization on the convergence of developing and developed countries of the world economy to each other.

Undoubtedly the strongest impacts of globalization are observed in the area of financial system. The so called financial globalization has undergone the greatest expansion after the Asian financial crisis. It is reflected in a global deployment of large amounts of capital in other countries. For comparison Krugman (2009) states that in 1996 the amount of US assets located abroad was 52% of the GDP, while the amount of liabilities was 57% of the GDP. In 2007 it was already 128% in favour of foreign assets of the USA and 145% were foreign liabilities. Two moments are therefore important. The first one is associated with the increase of debtor position of the USA towards abroad. The second one signalizes the unprecedented increase in the volume of mutual debts. This strong link of the strong capital can be considered as an origin of all currency and financial crisis. When efforts to reduce risks in the domestic economy represented by moving a large part of capital abroad causes mutual interdependence of the world economies within the international currency and financial system against each other.



### 3. Monetary Stability of the Eurozone in the Current World Economy

Monetary stability of the Eurozone mainly depends on its internal macroeconomic stability. During the first decade of the Eurozone functioning there was a strong economic and financial integration between the individual Member States. In the spirit of the endogeneity hypothesis of the optimum currency area criteria (Frankel and Rose, 1998) there also occurred a process of convergence between poorer states on the periphery of Europe and economically developed countries of northern Europe, for details see Melecký and Skokan (2011). Research of monetary stability is currently an important topic of discussion at specialized universities where students are analysing the Eurozone position in international monetary systems. About this and other relevant topics that are subject of student activities, Staničková writes in her article (Staničková et. al, 2013).

However, nowadays financial and debt crisis is spread in the Eurozone. Despite the fulfilment of fiscal and monetary Maastricht criteria which the countries had to follow before joining the Eurozone, they are now in a situation of debt traps and outflow of foreign capital. Elimination of exchange rate risk in the application of common currency has led primarily to a decrease in the costs on lending in these countries, which then reflected in a positive economic growth in the Eurozone peripheries and capital inflows. Paradoxically, this low interest rate led to excessive lending and inflating bubbles in peripheral countries (Ireland, Portugal, and Spain), see Ruá, M.J. et al. (2010). Unfortunately borrowed funds were not directed productive capacity building, but they were invested to real estates, consumed by households and the government. The resulted increased domestic aggregate demand caused a pressure for higher wages and price which finally resulted in decreasing competitiveness of these economies on the world markets. These countries have lost a share on the global market due to the integration of China and other emerging markets into global production chains.

Internal problems represented by inadequate coordination of economic policies in the Eurozone contributed to the expansion of macroeconomic imbalances. Some of the Eurozone countries had bloated government spending (Greece and Portugal) which led to an increase in their domestic demand due to its debt financing. In contrast economies, which enjoyed high rates of economic growth, did not dampen increasing private demand and did not create building up of budget surpluses for a less favourable economic period. Temporary increase of output in the economy was caused by rampant real estate sector. The intense growth of tax revenues led to tax cuts and growth of expenses, which in the long run mainly in times of global economic crisis, proved to be unsustainable.

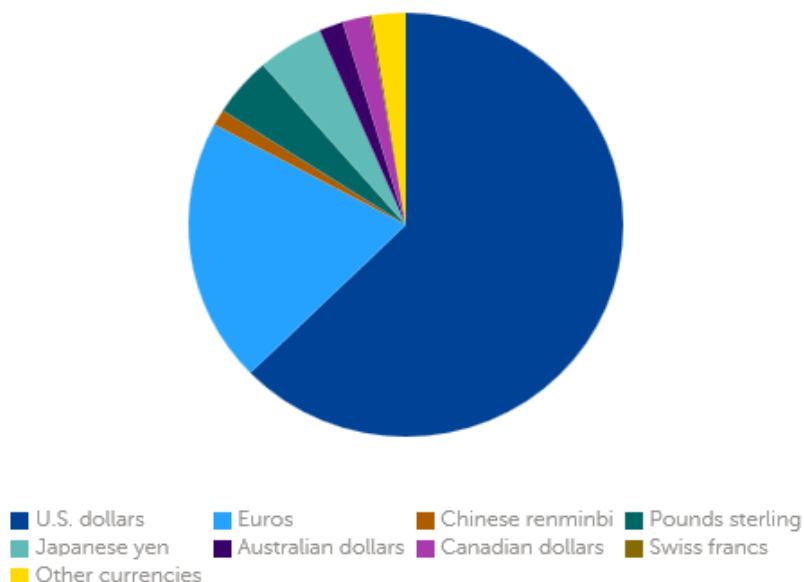
Another factor, which destabilized the Eurozone economy, was a structure of goods market and labour markets which helped to the excessive wage growth and price increases. Mainly in the peripheries of the Eurozone were increased wages due to a limited competition in the labour market; these were ultimately passed on the consumers through higher prices.

An important factor was also indiscipline on the financial markets. Despite the economic growth, unsustainable due to its character, and growing foreign debt of the states on the periphery of the Eurozone, financial markets did not reveal, as well as market regulators, too much interest in this situation. This behaviour could be caused by a global decline in aversion to risk, because great financial crises were considered to be unlikely and as a result this led to riskier investment behaviour.

As the above mentioned states the Eurozone faces its own macroeconomic problems which destabilize it outwardly. Its geopolitical position may gradually become weaker if it does not solve its internal difficulties in the nearest future, see Sucháček (2016). The time in this case

is an important parameter, because in nowadays globalized world other important countries from the emerging markets enter the geopolitical scene.

**Figure 2: Composition of International Foreign Exchange Reserves (Allocated Reserves by Currency for 2017Q2)**



Source: IMF (2018)

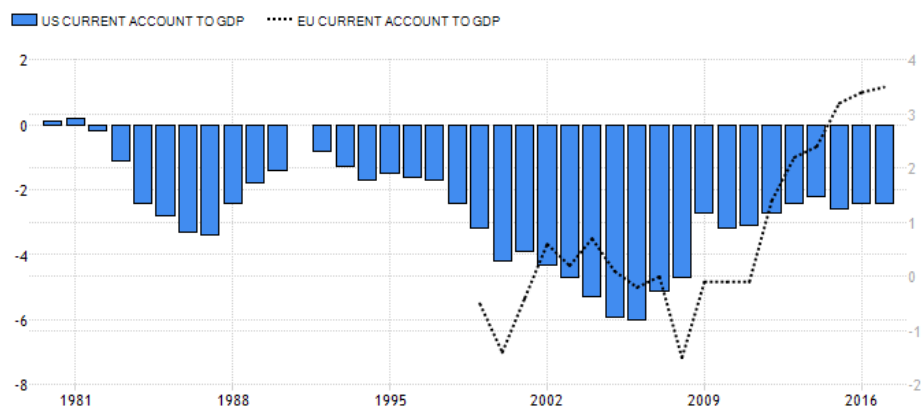
When assessing external stability of the Eurozone, i.e. the position of euro in the current conditions of the world economy, the euro share is a significant determinant in the international foreign exchange reserves. During its existence euro has become, after the US dollar, the second most important reserve currency in the international monetary system. While the share of USD was decreasing the percentage share of euro was increasing from 17.90 % in 1999 to 26.14 % in 2007, see Table 1. Figure 2 shows the shares of the most important world currencies on the international foreign exchange reserves for 2017Q2. It reflects the above mentioned fact that the US dollar still holds its dominant position with its 62.70 % share. Euro in 2017 comprised 20.15 % of the international foreign exchange reserves in the world. Other currencies like the British pound, and Japanese yen in comparison with the USD and euro play only a partial role in the international monetary system.

**Table 1: World Currency Composition of Official Foreign Exchange Reserves (in %)**

	1971	1973	1999	2007	2017
<b>Shares of Allocated Reserves</b>	76.21	70.93	77.43	61.48	87.69
<b>Shares of U.S. dollars</b>	84.63	82.61	71.01	63.87	62.70
<b>Shares of euros</b>			17.90	26.14	20.15
<b>Shares of Chinese renminbi</b>					1.23
<b>Shares of Japanese yen</b>	0.05	0.07	6.37	3.18	4.89
<b>Shares of pounds sterling</b>	9.67	5.63	2.89	4.82	4.54
<b>Shares of Swiss francs</b>	1.16	1.47	0.23	0.16	0.18
<b>Shares of other currencies</b>	0.54	1.21	1.60	1.83	2.50
<b>Shares of Unallocated Reserves</b>	23.79	29.07	22.57	38.52	12.31

Source: IMF (2018)

The international monetary system is therefore nowadays strongly oriented to American dollar as a dominant international reserve currency. The subject for discussion is a proposal of a new arrangement of the international monetary system with respect to economic and political problems which the USA faces. In comparison with the Eurozone the United States deal with the so called *double deficit*. They show a budget deficit in the public sector, but also deficit on the current account of the payment balance, see Table 6.

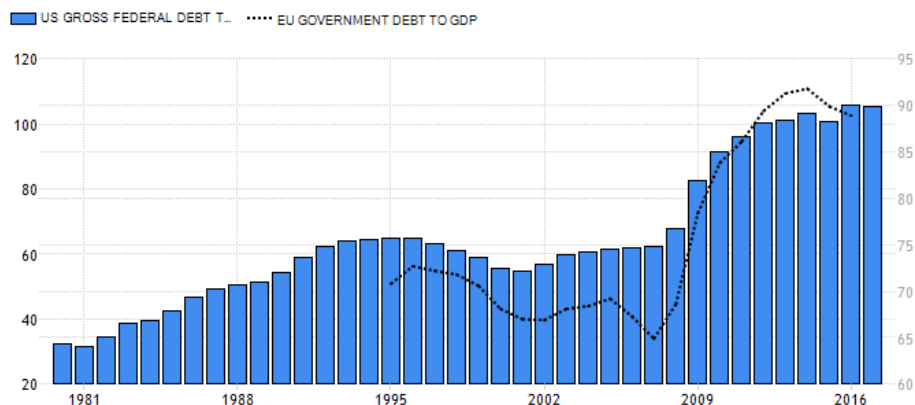
**Figure 3: US and Eurozone Current Account to GDP (in %)**

Source: Trading Economics (2018)

The Eurozone is in comparison with the USA able to achieve positive balance on a current account, the USA is permanently located in negative values. Eurozone recorded a Current Account surplus of 3.50 percent of the country's Gross Domestic Product in 2017. Current Account to GDP in the Eurozone averaged 0.71 percent from 1999 until 2017, reaching an all-time high of 3.50 percent in 2017 and a record low of -1.50 percent in 2008. The United States recorded a Current Account deficit of 2.40 percent of the country's Gross Domestic Product in

2017. Current Account to GDP in the United States averaged -2.64 percent from 1980 until 2017, reaching an all-time high of 0.20 percent in 1981 and a record low of -6 percent in 2006 (Trading Economics, 2018).

**Figure 4: US and Eurozone Government Debt to GDP (in %)**



Source: Trading Economics (2018)

Euro Area recorded a government debt equivalent to 88.90 percent of the country's Gross Domestic Product in 2016. Government Debt to GDP in the Euro Area averaged 75.74 percent from 1995 until 2016, reaching an all-time high of 91.80 percent in 2014 and a record low of 64.90 percent in 2007. The United States recorded a government debt equivalent to 105.40 percent of the country's Gross Domestic Product in 2017. Government Debt to GDP in the United States averaged 61.70 percent from 1940 until 2017, reaching an all-time high of 118.90 percent in 1946 and a record low of 31.70 percent in 1981 (Trading Economics, 2018).

#### 4. Conclusion

A question therefore arises whether euro could take a baton after the US dollar and become a world currency number one. Lim (2006) states five important criteria that currency with the status of an international currency reserve must comply. They are as follows: a) great economic power, b) well-developed financial system, c) confidence in the value of the currency, d) political stability, e) network externalities. The US dollar was gaining its position by a gradual extrusion of British pound in its leadership position in the period between the two world wars. However the British pound has maintained its status of a reserve currency until today. The reason still remains high and frequent usage of the British pound all over the world which led to reduction of transaction costs and subsequent increase in the usage of this currency in the international trade, see Vahalík and Fojtíková (2016). The same network effect can be seen with the US dollar, since the moment when it has become the world reserve currency. In the future it does not seem very likely to happen that the British pound would threaten the US dollar in its leading position. Much more significant shares of the global foreign exchange reserves may reach euro, Japanese yen and other currencies of the *emerging market*. This development will probably dependent on the robustness of the domestic institutional environment in the financial sector. If the above mentioned economies want to absorb the influx of capital flows, then it is necessary for this to have correct size and institutional background of the financial markets.

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## References

- [1] Eichengreen, B. (2008). *Globalizing Capital: A History of the International Monetary System*. Princeton: Princeton University Press.
- [2] Frankel, J. A. and Rose, A. K. (1998). Endogeneity of the optimum currency criteria. *Economic Journal*, vol. 108, iss. 449, pp. 1009–1025.
- [3] Helísek, M. (2004). *Currency Crisis: Theory and empiricism*. Praha: Professional Publ.
- [4] IMF. (2018). *Currency Composition of Official Foreign Exchange Reserves (COFER), International Financial Statistics (IFS)* [online]. [cit.2018-04-19]. Available at: <http://data.imf.org/>.
- [5] Krugman, P. (2009). *The Return of Depression Economics and the Crisis of 2008*. Praha: Nakladatelství Vyšehrad.
- [6] Lim, E.-G. (2006). *The Euro's Challenge to the Dollar: Different Views from Economists and Evidence from COFER (Currency Composition of Foreign Exchange Reserves) and Other Data* [online]. [cit.2018-04-19]. Available at: <http://www.imf.org/external/pubs/cat/longres.aspx?sk=19253.0>.
- [7] Melecký, L. and Skokan, K. (2011). EU Cohesion and Its Evaluation in the Case of Visegrad Four Countries. In: *Liberec Economic Forum 2011. Proceedings of the 10<sup>th</sup> International Conference*. Liberec: Technical University of Liberec, pp. 314-326.
- [8] Němec, J. and Pravec, J. (2013). *End of "Golden" Times* [online]. [cit.2018-04-19]. Available at: [http://ekonom.ihned.cz/?p=400000\\_d&article\[id\]=59967220](http://ekonom.ihned.cz/?p=400000_d&article[id]=59967220).
- [9] Revenda, Z. (2010). *Money and Gold*. Praha: Management Press.
- [10] Ruá, M.J., Guadalajara, N. and De La Poza, E. (2010). Impact of the urban landscape on residential housing prices in Valencia, Spain. In *COBRA 2010 - Construction, Building and Real Estate Research Conference of the Royal Institution of Chartered Surveyors*, pp. 17.
- [11] Sedláček, P. (2008). *International Monetary Fund in 21<sup>st</sup> Century*. Praha: C. H. Beck.
- [12] Staničková, M., Melecký, L. and Navrátil, B. Measuring the Student Research Projects' Efficiency Using DEA Method. In *Efficiency and Responsibility in Education 2013 - ERiE: proceedings of the 10th international conference: 6th-7th June 2013, Prague, Czech Republic, EU*. Prague: Czech University of Life Sciences Prague, 2013, s. 573-580.
- [13] Stuchlíková, Z. (2009). World Economy as a Socio-Economic System, Processes of its Formation, Development And Differentiation. In E. Cihleková, & aj. *World Economy. General Trends of Development*. Praha: C. H. Beck, pp. 1–31.
- [14] Sucháček, J. (2016). Virtual Weakness of Europe of Regions: the Case of the Czech Republic. In Kovářová, E., L. Melecký and M. Staničková (eds.). *Proceedings of the*

*3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 918-925.

- [15] The Market Oracle. (2018). *40 Years of Fiat Currency, Is Gold as 'Cheap' as it was in 1971?* [online]. [cit.2018-04-19]. Available at: <http://www.marketoracle.co.uk/Article29939.html>.
- [16] Trading Economics. (2018). *Indicators* [online]. [cit.2018-04-19]. Available at: <http://www.tradingeconomics.com/>.
- [17] Vahalík, B. and Fojtíková, L. (2016). Trade with BRICS: Effect of Transportation Costs. In Kovářová, E., L. Melecký and M. Staničková (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 1030-1042.

## **Social Cohesion of Polish Regions in the Light of the EU Membership**

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### **Abstract**

*The EU promotes economic, social and territorial cohesion in its international grouping. Social cohesion, in particular, should be considered, which was emphasised in the Europe 2020 strategy, in the face of problems that emerged in EU member states, especially after the financial and economic crisis. This is reflected in the amount of financial resources directed to promoting social cohesion under the European cohesion policy and mobilised from the European Social Fund and other European initiatives. Social cohesion is a multidimensional concept, related to the improvement to the well-being of the citizens as well. Being a member of the European Union should have positive effects on the socio-economic situation of Poland and its regions. The main aim of the paper is to present social cohesion in Poland after accession to the EU. Along with the membership in the EU, there has been an improvement to the economic situation of Poland. The question is: is the improvement to the economic situation also reflected in the increase in social cohesion?*

**Keywords:** *European Union, regional disparities in the EU, regions, social cohesion, social innovations*

**JEL Classification:** *035, R11, R12*

### **1. Introduction**

Promoting cohesion not only in the economic, but also in the social and territorial dimension is one of the objectives of the European cohesion policy. Social cohesion, in particular, should be considered, which was emphasised in the Europe 2020 strategy (Europe 2020), in the face of problems that emerged in EU countries, especially after the financial and economic crisis. This is reflected in the amount of financial resources directed to promoting social cohesion under the European cohesion policy and mobilised from the European Social Fund and other European initiatives. Their beneficiaries primarily involve new member states, including Poland and its regions, which experience diverse social problems. Along with the membership in the EU, there has been an improvement to the economic situation of Poland reflected in the increase in GDP per capita. The question is: is the improvement to the economic situation accompanied by an increase in social cohesion? Have interregional disparities in social terms become worse within the last couple of years of Poland's membership in the EU and what is the situation of individual regions of our country like?

### **2. Problem Formulation and Methodology**

The main aim of the paper is to present social cohesion in Poland after accession to the EU. It is stated that social cohesion between Polish regions decreased and the projects co-financed

from the EU funds, including social innovations projects, should make a contribution to the achievement of a higher degree of social cohesion in Poland. These kinds of projects are supported within the EU cohesion policy, also in Poland, in the new financial perspective 2014-2020. The critical analysis of the scientific literature, the statistical analysis, and the Ward's method were performed.

### **3. Problem Solution**

Being the objective to be pursued, ensuring social cohesion in the EU is at the heart of the cohesion policy, which is indicated in the documents and strategies of the grouping (European Union, 2017). The financial and economic crisis contributed to the deterioration of social problems, thus more attention began to be paid to the social dimension of cohesion. Simultaneously, it has been increasingly emphasised that it is important not only to focus activities on the stimulation of strong economic growth, but also to pay attention to its consequences as they may not be beneficial to all social groups in all instances. Therefore, economic growth should also be inclusive, which means that its benefits should be enjoyed to a greater extent by various social groups (OECD, 2014).

#### ***3.1. Social Cohesion - Concept and Its Measurement***

It is emphasised that social cohesion may be perceived as a condition conducive to the political stability and safety, constitutes a source of well-being and economic growth, while relationships between social cohesion within a country and economic results are also indicated. Gaps in terms of this cohesion, which manifest themselves in the form of, for example, social exclusion, result in higher public spending (Berger-Schmitt, R., 2002, p. 404-405). When raising the issues of reducing social cohesion, attention is drawn to its causes, which include: globalisation and economic changes associated with it, global migration and increasing ethno-cultural diversity, development of IT and communication technologies affecting social relations, while referring to the integrating group being the EU, accession of new member states also constitutes a challenge to cohesion (Schiefer, D., van der Noll, J., 2017, p. 580).

The concept of social cohesion is widely considered in the subject literature, whereas a considerable number of its definitions indicate a difficulty in conveying the gist of the concept, which is multidimensional. One of the presented approaches refers to social cohesion in the framework of the following dimensions given in Table 1.

The referenced definitions in the subject literature emphasise cohesion as community bonds, sharing values, a sense of belonging, and an ability to work together (Council of Europe, 2005, p. 24-25). In view of the complexity and ambiguity of the approach itself, there are attempts to identify it. The necessity of separating key cohesion elements and determinants is considered. Schiefer and van der Noll identify three key dimensions of social cohesion: social relations (including social networks, trust, acceptance of diversity, participation), identification with the geographical unit, and orientation towards the common good, while there are individual subdimensions within these dimensions. However, the elements such as: shared values, inequalities, quality of life are more associated with determinants or social cohesion consequences than with key social cohesion elements (Schiefer, D., van der Noll, J., 2017, p. 579-603).



**Table 1: Characteristics of Dimensions of Social Cohesion**

Dimensions	General description
Common values and civic culture	Sharing common values that make it possible to reach common goals, a certain and mutually respected code of conduct and moral principles. On the basis of these values, there are mutual interactions between members of society. Support for political institutions, engaging citizens in, for example, the political system and supporting it; inhabitants' tendency to participate in local/national policies, trust in and acceptance of the government, observing mutually agreed rights, respecting principles of responsibility. Joint debating in a democratic manner, engaging in public issues and matters common to society.
Social order and social control	No major conflicts, no social unrest or disorder, acceptance of the existing order, system, or respecting existing differences/tolerance related to social groups. Social order means that there is a certain network of connections, obligations etc. regarding people, thus every person has/feels that they have their own place in this order and bears some benefits.
Social solidarity and fewer disparities in terms of well-being	Within society, social cohesion is connected with a harmonious development of society or its groups. Making decisions in favour of cohesion by redistributing resources in the name of solidarity as well as creating opportunities for regions and social groups. Cohesion is linked to the level of inequality in terms of access to employment, income, or access to other resources. Cohesion is linked to equality in society. Cohesion is related to inclusion because access to various resources is provided by solidarity along with redistribution activities performed with the use of public policies. On the other hand, reduction of existing economic and social disparities has a positive effect on existing personal relations or on safety. Social exclusion is associated with cohesion. It involves being unable to be supported or participate in social life etc.
Social networks and social capital	Cohesion is associated with social interactions within society. It establishes social connectedness. Strong connections are significant in terms of mental health or counteracting marginalisation. They also provide emotional support. Social involvement networks contribute to/provide social capital.
Attachment to a place and territorial integrity	Social cohesion is associated with the concept of belonging, attachment to a place, and mobility. Close attachment to a place, building identity in relation to the place favours network building, creating identity, or providing social capital.

Source: this is a modified table presented in: Dziembała, M., 2013, p. 59-60 and developed based on Kearns, A., Forrest, R., 2000, p. 996-1002; Turok., I. et al., 2004, p. 21-24; Turok, I., Bailey, N., 2004, pp 175-186; McCormick, J., 1995, p. 1-32; Vranken, J., 2008, p. 23-24; Home Office, 2001, p. 13, Table 1

It is indicated that policies and adopted strategies, e.g. multiculturalism, may affect this type of cohesion (Levräu, F., Loobuyck, P., 2013, p. 101-109). Simultaneously, it is emphasised that the concept of social cohesion involves the following two dimensions of social goals, which should be considered as one, i.e. inequality. Therefore, promoting equal opportunities and limiting divisions in society are taken into account. Another dimension includes social capital, which emphasises the necessity of focusing on the reinforcement of social bonds and relations, including aspects associated with social capital (Berger-Schmitt, R., 2002, p. 406).

At the same time, there are attempts to operationalise this concept, which would enable cohesion to be measured; however, the fact that the concept is qualitative in nature is an issue (Dragolov, G. et al., 2013, p. 17). Cohesion is analysed in the framework of individual factors that may affect this cohesion considerably, such as diversity (Ariley, G., 2014, Wiceks, R., et al., 2014). One of the approaches perceives cohesion through how members of society live together in a given area (Dragolov, G. et al., 2013, p. 13). The following three domains of social cohesion were indicated: resilient social relations, i.e. networks horizontal in character and connecting society group individuals, connectedness in relation to members, countries, institutions linked together with positive bonds, and focus on common goods. Three dimensions were identified for each of these three domains (Dragolov, G., et al., 2013, p. 13-14).

Another approach considers social cohesion as an ability of society to ensure long-term well-being of its members. It is expressed in equal access to resources and respect for human dignity (Council of Europe, 2005, p. 23). The Council of Europe, on the other hand, perceives social cohesion as a (perfect) objective, a process (of creating this cohesion), and as acquisition (Council of Europe, 2005, p. 47-48).

### **3.2. Social Cohesion in Polish Regions after Accession to the European Union**

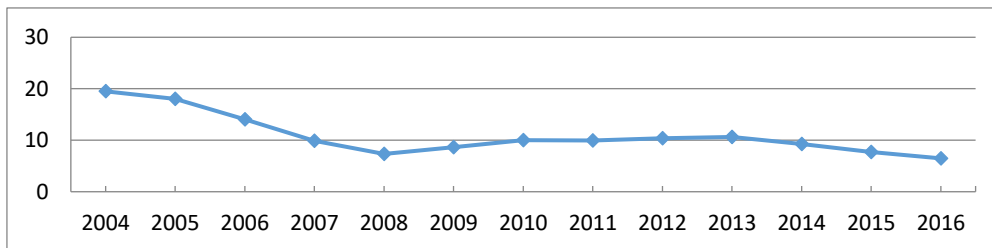
The issue of social cohesion is widely analysed in the subject literature. What is studied include not only cohesion between countries, but also between regions within one country (European Commission, 2017), or between selected regions (Bočáková, O., 2016). The analysis includes cohesion of cities as well (Cortese, C. et al., 2014).

For the purposes of the studies in this paper, it was assumed that “social cohesion is supposed to prevail when disparities on a number of social indicators are politically sustainable” (Molle, W., 2007, p. 61), which meant that a decreasing number of disparities reflect an improvement to social cohesion (Molle, W., 2007, p. 1). The assumption was that the indicators concerning demographic changes, public health, poverty and living conditions, education, access to the labour market, or public security will describe social cohesion in Polish regions well. Data selection was also dictated by their availability (CSO [online], 2018).

The process of Poland's integration with the EU contributed to the acceleration of economic growth and the improvement to the level of economic development, which is reflected by GDP per capita. While GDP per capita in Poland was 50% of the GDP per capita in the EU in 2004, it increased to 60% in 2008, and it further increased to 68% in 2016 (in the PPS) (Eurostat [online], 2018). Therefore, the question is as follows: were these positive changes accompanied by the improvement to social cohesion in Polish regions? As already mentioned, cohesion is associated with a decreasing number of disparities between regions. The evaluation involved current disparities in relation to selected indicators that describe social cohesion between Polish voivodships, i.e. NUTS 2 regions, which was also dictated by data availability.

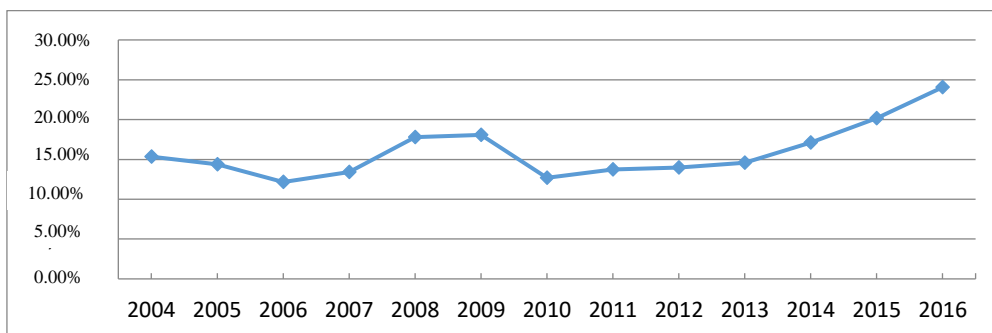
The social cohesion situation may be evaluated with the use of unemployment rate. Between 2004-2016, the unemployment rate in Poland (according to the BAEL- Labour Force Survey in Poland) was gradually decreasing (Figure 1). The range, i.e. the difference between the highest and lowest unemployment rate, decreased from 10.3 p.p. to 4.9 p.p. during the analysed period. At the same time, the coefficient of variation increased, which indicates an increase in the number of disparities between voivodships, thus deterioration of interregional disparities and, consequently, cohesion (Figure 2). While the relationship between unemployment rate in the region with its highest value and unemployment rate in the region with its lowest value was 1.7 in 2004, it increased to 2 in 2016.

**Figure 1: Mean Unemployment Rate (acc. to the BAEL) for Polish Voivodships in 2004-2016 (expressed in %)**



Source: author's own elaboration based on CSO [online] (2018)

**Figure 2: Coefficient of Variation of the Unemployment Rate (acc. to the BAEL) for Polish Voivodships in 2004-2016**



Source: author's own elaboration based on CSO [online] (2018)

However, the analysis of the unemployment rate in Polish voivodships reveals that while 8 voivodships had a lower unemployment rate compared to the mean rate for Poland in 2004, the number of such voivodships increased to 9 in 2016. There are voivodships in which the unemployment rate was higher compared to the mean rate in Poland during the analysed period. These voivodships included: Świętokrzyskie, Kujawsko-Pomorskie and Warmia-Mazury (Table 2).

**Table 2: Differences in the Unemployment Rate Values in Individual Voivodships and Unemployment Rates in Poland in 2004-2016 acc. to the BAEL (expressed in p.p.)**

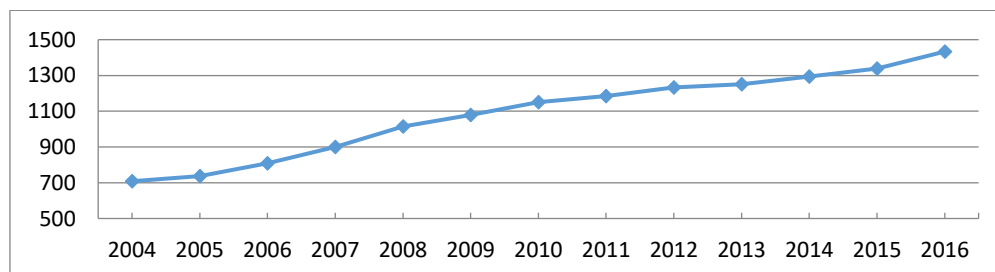
Voivodship	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Lódzkie	-0.3	-0.5	-0.5	-0.3	-0.4	-0.5	-0.5	-0.4	0.9	0.8	-0.2	0.2	-0.6
Mazowieckie	-4.5	-3.1	-1.7	-0.5	-1.1	-2.1	-2.3	-1.8	-2.1	-2.3	-1.8	-1.1	-0.7
Małopolskie	-1.9	-2.7	-1.4	-1.1	-0.9	-0.1	-0.6	-0.3	0.3	0.5	0.1	-0.3	-1.0
Śląskie	0.2	1.1	0.2	-1.5	-0.5	-1.4	-0.6	-0.5	-0.7	-0.6	-0.4	-0.3	-0.8
Lubelskie	-2.4	-3.6	-1.2	-0.1	1.7	1.6	0.2	0.6	0.4	0.0	0.9	1.8	1.8
Podkarpackie	-2.4	-1.3	-0.3	0.0	1.1	1.9	1.9	2.7	3.1	4.0	5.0	4.2	3.4
Podlaskie	-3.5	-3.6	-2.5	-0.7	-0.7	-1.0	0.5	-0.5	-0.8	-0.4	0.1	-0.6	0.6
Świętokrzyskie	1.5	1.1	1.7	2.5	1.7	2.8	2.3	3.2	3.0	2.7	2.3	2.6	2.7
Lubuskie	4.1	1.2	0.0	0.2	-0.6	1.5	0.8	-0.2	-1.1	-0.7	-0.6	-1.2	-1.5
Wielkopolskie	-0.9	-0.7	-1.2	-1.3	-1.0	-0.6	-1.0	-1.0	-1.6	-1.5	-1.3	-1.7	-1.4
Zachodniopomorskie	4.7	4.8	3.2	1.9	2.5	2.2	2.7	2.1	0.9	-0.3	-0.5	0.0	0.7
Dolnośląskie	5.8	4.9	3.2	3.1	2.0	2.0	1.6	0.9	1.0	1.0	0.1	-0.5	-0.8
Opolskie	-1.3	-0.9	-0.7	-0.3	-0.5	1.7	0.0	-0.4	-0.6	-0.9	-1.2	-1.0	-1.2
Kujawsko-Pomorskie	3.0	1.9	2.2	1.7	2.0	2.3	0.9	1.3	1.7	2.1	1.6	0.5	1.2
Pomorskie	1.1	1.0	-0.4	-0.1	-1.6	-1.7	-0.4	-1.2	-0.5	-0.2	-0.4	-0.9	-0.5
Warmia-Mazury	3.2	2.5	2.0	0.9	0.4	0.4	0.0	0.0	1.0	1.1	0.8	1.9	2.6

Differences in the unemployment rate values in individual voivodships and unemployment rate in Poland

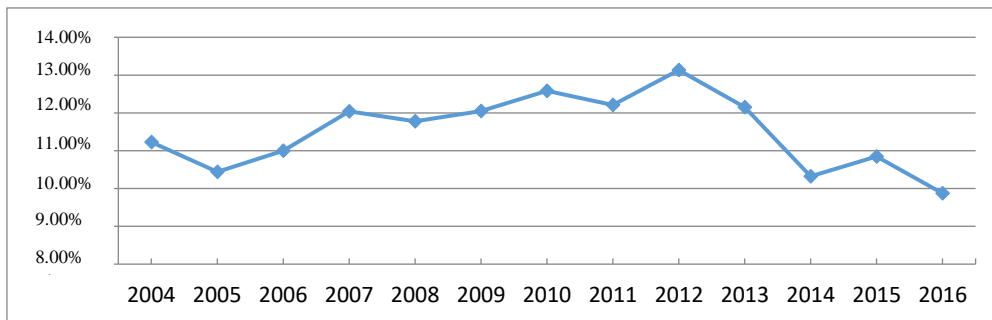
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Source: author's own elaboration based on CSO [online] (2018)

Another indicator that may be used to present social cohesion is household's monthly available income per 1 person. Between 2004-2016, the income situation of the citizens of Poland improved since household's monthly available income per 1 person was PLN 708.355 in 2004 to increase to PLN 1433.31 in 2016 (Figure 3). However, the improvement to this indicator did not accompany deterioration of interregional disparities, which is indicated by the analysis of the coefficient of variation over the following years (Figure 4).

**Figure 3: Average Household's Monthly Available Income per 1 Person in Polish Voivodships in 2004-2016 (expressed in PLN)**

Source: author's own elaboration based on CSO [online] (2018)

**Figure 4: Coefficient of Variation of Average Household's Monthly Available Income per 1 Person in Polish Voivodships in 2004-2016**

Source: author's own elaboration based on CSO [online] (2018)

Between 2004-2016, household's monthly available income per 1 person in 3 voivodships was lower than the mean value for Poland; these voivodships included: Lubelskie, Podkarpackie, and Świętokrzyskie - which are also the poorest regions in terms of the volume of GDP per capita (Table 3).

In view of the selected indicators, a definite statement whether social cohesion in Polish regions improved or deteriorated is difficult. Therefore, it was assumed that a synthetic measure will constitute a comprehensive reflection of various dimensions of social cohesion.

**Table 3: Indicator of Average Household's Monthly Available Income per 1 Person in Relation to the National Average (Poland = 100) in 2004-2016**

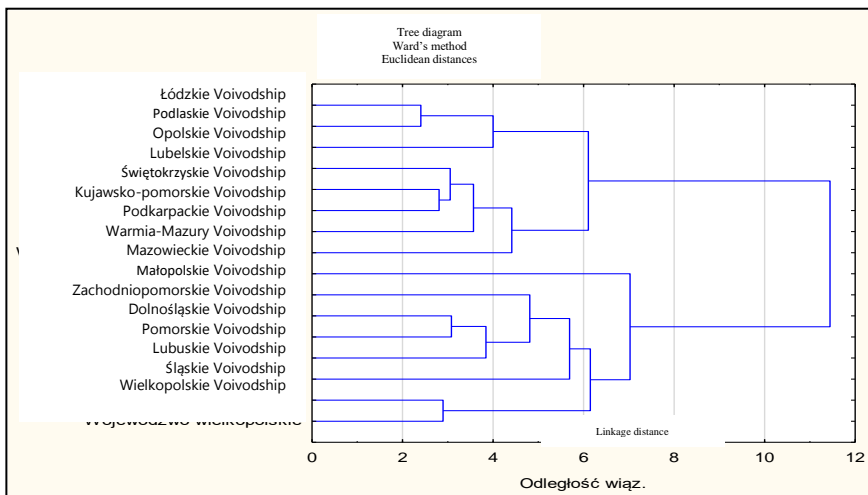
Voivodship	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Lódzkie	103.4 2%	105.0 7%	104.3 0%	101.8 4%	100.6 7%	104.0 5%	102.7 5%	101.6 5%	102.8 9%	103.3 1%	100.0 0%	101.8 1%	102.2 8%
Mazowieckie	133.1 1%	128.1 7%	130.7 0%	134.9 5%	132.7 7%	134.2 5%	139.6 4%	137.1 1%	138.7 0%	134.7 1%	131.7 2%	131.2 6%	124.9 1%
Małopolskie	101.6 0%	100.0 6%	95.35 %	96.63 %	99.42 %	97.21 %	96.54 %	97.73 %	96.51 %	97.84 %	97.47 %	97.58 %	99.84 %
Śląskie	105.9 4%	108.3 3%	105.6 7%	102.7 7%	103.4 3%	103.9 5%	101.8 5%	102.6 8%	103.7 3%	105.1 0%	106.8 3%	106.1 8%	106.1 4%
Lubelskie	95.80 %	91.87 %	90.36 %	88.50 %	87.49 %	84.82 %	85.30 %	86.66 %	85.69 %	88.10 %	93.43 %	91.69 %	91.12 %
Podkarpackie	82.88 %	84.58 %	80.60 %	78.33 %	78.61 %	77.88 %	79.09 %	79.23 %	77.80 %	79.50 %	81.42 %	80.85 %	79.54 %
Podlaskie	91.30 %	99.02 %	101.7 0%	98.82 %	92.94 %	95.06 %	96.17 %	103.4 9%	100.7 7%	100.2 6%	97.32 %	94.02 %	99.58 %
Świętokrzyskie	87.13 %	84.86 %	87.04 %	86.70 %	87.24 %	87.52 %	89.47 %	89.79 %	90.83 %	91.91 %	92.76 %	89.90 %	91.60 %
Lubuskie	92.64 %	94.45 %	104.9 7%	102.2 1%	105.1 9%	102.9 5%	100.5 1%	100.5 3%	99.86 %	98.66 %	99.39 %	106.1 1%	105.1 0%
Wielkopolskie	99.22 %	100.9 3%	101.4 6%	99.44 1%	101.1 9%	102.3 9%	98.13 %	95.89 %	93.56 %	96.16 %	98.10 %	96.26 %	98.19 %
Zachodniopomorskie	107.8 9%	104.1 9%	104.0 3%	101.0 1%	104.2 1%	106.3 5%	103.4 6%	104.0 1%	102.4 9%	100.0 8%	105.5 7%	106.6 5%	104.0 1%
Dolnośląskie	106.0 2%	106.3 0%	106.3 0%	106.3 1%	111.1 3%	109.5 7%	108.0 2%	108.3 9%	110.8 8%	107.1 6%	105.6 5%	110.0 1%	111.2 4%
Opolskie	105.4 2%	108.8 1%	99.06 %	102.3 7%	107.3 0%	100.9 %	97.26 %	99.85 %	104.9 8%	95.53 %	96.24 %	96.33 %	97.49 %
Kujawsko-Pomorskie	92.43 %	90.73 %	96.09 %	100.3 8%	94.37 %	94.71 %	100.9 9%	93.69 %	91.98 %	93.19 %	92.90 %	93.11 %	91.79 %
Pomorskie	106.6 5%	109.4 6%	113.4 7%	115.1 6%	109.5 0%	108.6 6%	108.3 3%	108.7 3%	109.5 5%	114.2 4%	106.4 2%	103.2 2%	109.4 4%
Warmia-Mazury	93.11 %	95.82 %	93.03 %	93.39 %	97.27 %	101.1 8%	96.18 %	92.67 %	90.03 %	88.37 %	95.08 %	95.71 %	96.22 %

	>110%
	< 100%; 109.9% )
	<90%; 99.9%)
	< 90%

Source: author's own elaboration based on CSO [online] (2018)

It was considered that a synthetic variable, which includes variables representing various social cohesion aspects: public health, poverty and living conditions, education, access to the labour market, factors determining poverty and delinquency, should be used to examine social cohesion in Polish voivodships. As a result of applying the variable selection procedure, including the literature review, statistical analysis and data availability, the following 12 variables were finally included in the analysis:  $X_1$  – infant deaths per 1 000 live births,  $X_2$  – suicide rate per 10 thous. population,  $X_3$  – average number of people in a household receiving social benefits in relation to the average number of persons per household,  $X_4$  – average monthly available income per capita in private households (expressed in PLN),  $X_5$  – children covered by pre-school education in percentage of the total number of children at the age 3-5,  $X_6$  – life-long learning of persons aged 25-64 (expressed in %),  $X_7$  – unemployment rate acc. to the BAEL (expressed in %),  $X_8$  – employment rate of disable people (expressed in %),  $X_9$  – entitled to practise doctors per 10 thous. population,  $X_{10}$  – persons injured in accidents at work per 1,000 employed persons,  $X_{11}$  – ascertained by Police crimes in completed preparatory proceedings per 1,000 population,  $X_{12}$  – victims of road accidents per 100 thous. registered motors. The analysis covers the years 2005 and 2015. As a result of applying one of the hierarchical cluster analysis methods - the Ward's method, which is one of the agglomeration methods (see: Balicki, 2009, p. 276-279), voivodships were classified, and a dendrogram with clusters was developed (Figure 5).

**Figure 5: Classification of Polish Voivodships with the Use of the Ward's Method, 2015**



Source: author's own elaboration based on CSO [online] (2018)

In the light of these studies involving the 2015 data and the adopted set of variables, three clusters of regions similar to each other were found. The 1<sup>st</sup> group includes 8 voivodships: Łódzkie, Podlaskie, Opolskie, Lubelskie, Świętokrzyskie, Kujawsko-Pomorskie, Podkarpackie, and Warmia-Mazury. The 2<sup>nd</sup> group constitutes only the Mazowieckie voivodship. The last 3<sup>rd</sup> group includes: Małopolskie, Zachodniopomorskie, Dolnośląskie,

Pomorskie, Lubuskie, Śląskie, and Wielkopolskie. As a result, „cohesion groups”, including regions similar to each other on the basis of the adopted set of variables, may be distinguished. According to the voivodships classification made with the use of the Ward’s method and including the 2005 data, three clusters of voivodships were determined as well; the first cluster involves the following voivodships: Łódzkie, Podlaskie, Małopolskie, Wielkopolskie, Opolskie, and Mazowieckie. The second cluster comprises: Lubelskie, Podkarpackie, Świętokrzyskie, Lubuskie, Kujawsko-Pomorskie, and Warmia-Mazury. The third and last cluster includes: Śląskie, Pomorskie, Zachodniopomorskie, and Dolnośląskie. In view of the 2005 and 2015 data, the comparative analysis of the composition of the clusters determined using the Ward’s method reveals that the following regions: Lubelskie, Podkarpackie, Świętokrzyskie, and Kujawsko-Pomorskie were included in the same voivodship cluster in the years 2005 and 2015 under consideration.

### ***3.3 EU Funding Support to Improve Social Cohesion in Poland in 2014-2020***

In Poland, activities focused on social cohesion are supported by European Union funds, which - either directly or indirectly - have a positive impact on the well-being of citizens or, thus, contribute to achieving social cohesion. In the 2007-2013 and 2014-2020 financial perspectives, financial resources were transferred from the European Regional Development Fund and the European Social Fund (ESF). However, it is and was from the ESF that resources directly targeted at supporting solutions concerning social issues were transferred, which were mobilised under the Operational Programme Human Capital 2007-2013 and, in the current perspective of financing, under the Operational Programme Knowledge Education Development 2014-2020. EUR 4,436.8 million were budgeted to implement the latter, including EUR 268.8 million under Youth Employment Initiative. 6 priority axes were formulated: axis I: young people on the labour market; axis II: effective public policies for the labour market, economy and education; axis III: higher education for economy and development; axis IV: social innovation and transnational cooperation; axis V: support for healthcare; and axis VI: technical assistance. To implement axis IV, EUR 621,916,101 were allocated from the ESF (Operational Programme..., p. 38-50, 256). One of the axes is supporting social innovations that constitute innovative solutions in terms of achieving social goals in specific areas, e.g. on the labour or healthcare markets. As emphasised, social innovations mean "such solutions that both respond to social needs and cause a permanent change within certain social groups" (Social Innovation Programme, NCBR, p. 1).

The intervention will include the use of social innovations for effective problem-solving in the areas of: employment, social inclusion, lifelong learning, health, modernisation of public administration functioning if they require a new approach to be developed. The following types of projects are supported: micro-innovations concerning incubation of new initial ideas, aimed at enabling to tackle the problems which have been the subject of the ESF intervention. The assumption is that social innovators will be supported in developing and advancing new initial ideas, which will be tested and disseminated, and then integrated into policy and practice. On the other hand, macro-innovations will involve developing, testing, and integrating the new solutions into policy and practice. Innovation scaling is also indicated, which involves the increase in the use of new solutions, the scope of which was limited territorially, or sectorally before (Operational Programme..., p. 204-210). It appears that these types of projects are an important complement to "traditional" instruments in terms of solving diverse social problems, while their implementation should contribute to increasing quality of life, well-being of citizens and, as a result, improving cohesion in Polish regions.

#### 4. Conclusion

To conclude, social cohesion is a multidimensional concept and involves diverse approaches not only with respect to its essence, but also how to measure it because social cohesion is difficult to perceive through only one indicator. In view of the selected indicators, a definite statement whether social cohesion in Polish regions improved or deteriorated is difficult because it is dependent on the adopted indicator. The results of the analysis show that we observed deterioration of interregional disparities in terms of unemployment rate, which is indicated by the analysis of the coefficient of variation over the following years. However, between 2004-2016, the unemployment rate for the entire country - Poland was gradually decreasing. Between 2004-2016, the income situation of the citizens of Poland improved; however, the improvement to this indicator did not accompany deterioration of interregional disparities. Therefore, the Ward's method was used to identify the clusters of voivodships in terms of the adopted variables. Three clusters of voivodships were identified, revealing that there are groups of „cohesive” regions in relation to the adopted set of variables. Further research should involve an in-depth analysis of how the values of individual indicators for voivodships in these three clusters for the years 2005 and 2015 develop.

This analysis is a contribution to the performance of further and detailed research concerning social cohesion in Polish regions. The proposed set of variables only concerns the ones of a quantitative nature. Further research on social cohesion should also consider data of a qualitative nature; what is more, the analysis should concern individual voivodships in Poland regarding their social cohesion situation in the light of the adopted, or perhaps expanded, set of variables, including ones of a qualitative or of a quantitative nature. It is also essential to identify conditions affecting the situation of social cohesion in Polish voivodships.

#### References

- [1] Ariely, G. (2014). Does diversity erode social cohesion? Conceptual and methodological Issues. *Political Studies*, vol. 62, iss. 3, pp. 573-595.
- [2] Balicki, A. (2009). *Statystyczna analiza wielowymiarowa i jej zastosowanie społeczno-ekonomiczne*. Gdańsk: Wydawnictwo Uniwersytetu Gdańskiego.
- [3] Berger-Schmitt, R. (2002). Considering social cohesion in quality of life assessments: concept and measurement. *Social Indicators Research*, vol. 58, no. 1-3, pp. 403-428.
- [4] Bočáková, O. (2016). Social Cohesion between Regions: Bratislava Region and Košice Region. In Kovářová, E., Melecký, L. and Staníčková, M. (eds.). *Proceedings of the 3rd International conference on European Integration 2016*. Ostrava: VŠB-Technical University of Ostrava, pp. 108-115.
- [5] Cortese, C., Haase, A., Grossmann, K. and Ticha, I. (2014). Governing social cohesion in shrinking cities: the cases of Ostrava, Genoa and Leipzig, *European Planning Studies*, vol. 22, iss. 10, pp. 2050-2066. <https://doi.org/10.1080/09654313.2013.817540>
- [6] Council of Europe (2005). *Concerted development of social cohesion indicators. Methodological guide*. Council of Europe Publishing [online]. [cit.2018-03-04]. Available at: [https://www.coe.int/t/dg3/socialpolicies/socialcohesiondev/source/GUIDE\\_EN.pdf](https://www.coe.int/t/dg3/socialpolicies/socialcohesiondev/source/GUIDE_EN.pdf)
- [7] CSO (2018). *Data: Sustainable development indicators* [online]. [cit. 2018-03-11]. Available at: <http://wskaznikizrp.stat.gov.pl/index.jsf>



- [8] Dragolov, G., Ignácz, Z., Lorenz, J., Delhey, J. and Boehnke, K. (2013). *Social Cohesion Radar. Measuring Common Ground. An International Comparison of Social Cohesion*. Blomberg: Bertelsmann Stiftung.
- [9] Dziembała, M. (2013). *Spójność ekonomiczno-społeczna i konkurencyjność regionów w polityce Unii Europejskiej*. Katowice: Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach.
- [10] Europe 2020. *A strategy for smart, sustainable and inclusive growth. Communication from the Commission*. COM (2010) 2020, Brussels, 3.3.2010.
- [11] European Union (2017). *My Region, My Europe, Our future. Seventh report on economic, social and territorial cohesion*. Luxembourg: Publications Office of the European Union.
- [12] Eurostat (2018). Statistics [online]. [cit.2018-03-13]. Available at: <http://ec.europa.eu/eurostat/data/database/>
- [13] Home Office (2001). *Community cohesion: a report of the independent review team, chaired by T. Cante*. London: Home Office [online]. [cit.2018-03-04]. Available at: <http://dera.ioe.ac.uk/14146/1/communitycohesionreport.pdf>.
- [14] Kearns, A. and Forrest, R. (2000). Social cohesion and multilevel urban governance. *Urban Studies*, vol. 37, no. 5-6, pp. 995-1017.
- [15] Levrau, F. and Loobuyck, P. (2013). Is multiculturalism bad for social cohesion and redistribution? *Political Quarterly*, vol. 84, iss. 1, pp. 101-109. <https://doi.org/10.1111/j.1467-923X.2013.02433.x>
- [16] McCormick, J. (1995). *Building a European civic culture: the case of the environmental movement* [online]. [cit. 2018-03-04]. Available at: [http://aei.pitt.edu/7294/1/002944\\_1.pdf](http://aei.pitt.edu/7294/1/002944_1.pdf).
- [17] Molle, W. (2007). *Cohesion policy*. London & New York: Routledge, Taylor&Francis Group.
- [18] OECD (2014). *Report on the OECD framework for inclusive growth. Meeting of the OECD Council at Ministerial level*. Paris 6-7 May 2014.
- [19] *Operational Programme Knowledge Education Development 2014-2020*, 27 December 2017 [online]. [cit. 2019-02-28]. Available at: [https://www.funduszeuropejskie.gov.pl/media/49709/PO\\_WER\\_27\\_12\\_2017.pdf](https://www.funduszeuropejskie.gov.pl/media/49709/PO_WER_27_12_2017.pdf).
- [20] Schiefer, D. and van der Noll, J. (2017). The Essentials of Social Cohesion: A Literature Review. *Social Indicators Research*, vol. 132, iss. 2, pp. 579-603. DOI 10.1007/s11205-016-1314-5.
- [21] *Social Innovation Programme*, NCBR [online]. [cit. 2018-02-29]. Available at: [http://www.ncbr.gov.pl/gfx/ncbir/userfiles/\\_public/programy\\_krajowe/innowacje\\_s\\_poleczne/opis\\_programu\\_is\\_1.pdf](http://www.ncbr.gov.pl/gfx/ncbir/userfiles/_public/programy_krajowe/innowacje_s_poleczne/opis_programu_is_1.pdf).
- [22] Turok, I., Bailey, N., Atkinson, R., Bramey, G., Docherty, I., Gibb, K., Goodland, R., Hastings, A., Kintrea, K., Kirk, K., Leibovitz, J., Morgan, J. and Paddison, R. (2004). Sources of city prosperity and cohesion: the case of Glasgow and Edinburgh. In Boddy, M. and Parkinson, M. (eds.). *City matters. Competitiveness, cohesion and urban governance*. Bristol: The Policy Press University of Bristol, pp. 13-31.

- [23] Turok, I. and Bailey, N. (2004). Twin track cities? Competitiveness and cohesion in Glasgow and Edinburgh. *Progress in Planning*, vol. 62, iss. 3, pp. 135-204.
- [24] Vranken, J. (2008). *Competitiveness and cohesion: a Janus head? Some conceptual clarifications*. In Ache, P., Andersen, H.T., Maloutas, T., Raco M. and Taşan-Kok, T. (eds.) (2008). *Cities between competitiveness and cohesion. Discourses, realities and cohesion*. Springer-Verlag, pp. 19-37.
- [25] Wickes, R., Zahnow, R., White, G. and Mazerolle, L. (2014). Ethnic diversity and its impact on community social cohesion and neighborly exchange. *Journal of Urban Affairs*, vol. 36, iss. 1, pp. 51-78. <https://doi.org/10.1111/juaf.12015>.

## **The Startups' Environment in European Union – Current Trends in Supporting New Business Initiatives**

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### **Abstract**

*Startups seem to play increasing role in the economic policy of the European Union. Policymakers encourage young entrepreneurs to start their own business through introducing several startup support measures in order to enable young jobseekers to enter into the labour market. Various undertakings have been developed in different European states. As the European Union seemed to be relatively slow to undertake more decisive steps in this regard, the new initiatives have been launched in order to strengthen the startup environment. These are among others: Entrepreneurship 2020 Action Plan, Horizon 2020 or Startup Europe which are supervised by the European Commission. The main objective of the paper is to discuss and evaluate the business environment for startups in European Union. The paper also presents today's trends in understanding and supporting this phenomenon both in individual states as well as at European level.*

**Keywords:** entrepreneurship, European Union, startups, young entrepreneurs

**JEL Classification:** M13, L26, O52

### **1. Introduction**

The phenomenon of startups has been gaining importance in recent years. The culture of startups has rapidly widespread across the world including Europe. Although startups have been increasingly becoming the object of interest for the economy, there is no unified definition or concept of a startup. For some authors it is an enterprise at the initial stage of development while for other authors it is a small company relating to the industry of new technologies. The term does not mean anything but simply the business. To put it more precisely - the person who runs the startup starts building the business, takes the first steps towards financial independence. Startup is nothing but a young company created by usually young people (Robehmed, 2013). The most widespread definition was created by Blank and Dorf, who are the authors of the "The Startup Owner's Manual". According to them a startup is "a temporary organization that is looking for a profitable, scalable and repeatable business model" (Blank, Dorf, 2012). Ries in turn, in his work "Lean Startup", claims that "a startup is an organization that creates products and services in conditions of extreme uncertainty" (Ries, 2011). Considering above mentioned definitions not every small company is a startup but only those which start their business with the risk that the product or service may not be accepted by the client. The uncertainty connected with the activity is intensified by the fact that a given business model does not have a direct representation in another, similar organization because no one previously has had such a business. It is not possible to predict the demand response, conditions and the success of the entire undertaking in the initial phase of operation. An additional element that has not been included in the definition is that this activity has a short

history of existence on the market, however, there is no predetermined time limit for operation. The moment when a startup turns into a company depends on the industry in which it operates, how long it takes to assess the risk and recognize the conditions of activity on the market. If a given product or service is not complicated and easy to put on the market, verification of the business model can take only a few weeks. However, in the case of complex projects, such as those in which long-lasting research is necessary the verification of the model may take up to several years. Startup is looking for a business model and its good definition is provided by Osterwalder and Pigneur. According to them the business model describes how the organization creates value and provides profits from this value (Osterwalder, Pigneur, 2010). The definitions of a startup do not express it clearly but as a rule one startup focuses on the development of one product. The most known startups from around the world are Uber, Airbnb, Dropbox, Snapchat, Pinterest, Spotify, LinkedIn.

The dynamic appearance of startups in the market and their importance for the economy created the need to build up a friendly environment for them by the policymakers and the system providing efficient support (Mynarzová, Štverková, 2015). The issue seems to be important for the European Union as well. The intention of the European Union is to prevent young and innovative European companies from escaping abroad mainly to the United States. Therefore various programs supporting startups have been launched under the auspices of the European Union. In 2016 the Initiative for Startups by the European Commission was announced (European Commission (a) [online], 2018). The main goal of this initiative are: the removal of barriers for startups in the Single Market; creation of better opportunities for partnership, commercial opportunities and skills; improving the access to finance (European Commission (a) [online], 2018).

The paper intends to increase the theoretical knowledge of the European Union policy for startups as well as the knowledge of the key programs which support the growth of the environment for startups in European Union. The paper ends with conclusion including brief assessment of the current situation referring to European startups. The research method used in the paper is the case-study method, which are examples from selected European states as well as selected European programs.

## **2. The Outline of Business Environment for Startups in European Union**

Promotion and support for European startups is the essential element of the broader European Union's concept for creation of the Digital Single Market as an element of the Common Market under which entrepreneurs receive tools to apply for different types of support (Mynarzová, Kaňa, Okręglicka, 2016). According to European Commission, the Digital Single Market strategy aims to ensure access to online activities for businesses under conditions of fair competition, consumer and data protection, protection of copyrights, elimination of geoblocking etc. (European Commission (a) [online], 2018). The startups are the integral part of this market as they are mostly based on digital solutions and innovation (European Startup Monitor [online], 2016). Startups play significant role in creation of wealth by providing new products or services to the market and creating large number of jobs (Dziwiński, 2016). Europe however has been lagging behind with the global trends in this regard. Part of European startups decided to move the business abroad where the conditions were much better. Currently the race for technological innovations and talents all over the world can be observed. More and more countries offer preferential conditions encouraging startups to operate in their territory. The European Union has taken up the challenge as well. The Digital Single Market strategy covers many measures which have been taken to encourage startups for running business in Europe. All these undertakings contribute to creation of a friendly business

environment for new ventures. At this moment it is essential to make a distinction to the business environment in individual member states and business environment at European Union level. Each member state offers different conditions for establishing, running as well as funding the startups. Therefore at current stage it is not possible to determine one, unified business environment for Europe as a whole. At European Union level meanwhile, the European Commission undertakes the actions which are intended to build a common framework for European startups' environment within the Common Market policy which includes primarily free flow of services, finances as well as fair competition (Barcik, 2016). It is however dependent on the implementation of those measures by all member states as well as promoting them among home entrepreneurs. For these reasons the startups' landscape within European Union seems to be diversified. Furthermore the phenomenon of creation of the local ecosystems for startups can be observed which then contribute to building so called startup hubs (Startup Hubs Europe [online], 2018). These are in most of cases vibrant and dynamically developing European cities offering preferential conditions for running startup businesses. The examples are among others: Berlin, Amsterdam, Helsinki or London. However if we analyze this situation more precisely it turns out that serious differences appear which mostly refer to the governmental involvement (Startus Magazine [online], 2016). Some member states spend no efforts to finance the startups' brands which were established in those states while the others offer very low financial support. There are numerous places in Europe that try to foster up the startups' initiatives which are Ireland, Czech Republic, Finland, Denmark or Poland but not everywhere at the same level (Krajcik, 2015). That is the reason why the European Union guided by the need to create the Digital Single Market and thus the more coherent Common Market desires to speed things up in order to remain the important trend setter of technology and innovation instead of becoming a trend taker (Startus Magazine [online], 2016). The following section of this paper focuses on the key initiatives which have been launched by the European Union recently.

### 3. European Union Initiatives for Startups

One of the most significant measures initiated by the European Commission is the Startup Europe project (Startup Europe [online], 2018). The project works as an umbrella organization and focuses on resolving specific problems of European startups' ecosystems. Its goal is to increase the innovation rate of Europe and to improve the growth of the economy through creating new job opportunities. According to the Startup Europe's mission, the main goals to be achieved are (Startup Europe [online], 2018):

7. Connecting startups, investors, accelerators, female entrepreneurs, universities, corporate networks through among others the specially designed Startup Europe Map connecting startup players in the ecosystems of Europe;
8. Connecting local startup ecosystems through support of regional initiatives which are for example the Startup Europe Regions Network or Startup Europe Week;
9. Supporting startups to enter into other market such as the Silicon Valley;
10. Appreciation of the startups' success through for example the Startup Europe Awards.

Another undertaking which is worth mentioning is the Startup Europe Partnership (SEP) which was established by the European Commission too. It is a part of Startup Europe. SEP aims to tackle the problem that as stated the continental Europe currently does not create new businesses intended for growth as it is done for example in Silicon Valley. SEP offers in this regard a pan-European platform in order to support startups in the scale-up process. This goal is expected to achieve through connecting European startups with corporates (Startus Magazine [online], 2016).

The cooperation between the European Commission and Startup Europe gave originated the Accelerator Assembly. Its aim is to facilitate connections among entrepreneurs, policy makers and accelerators. The program was launched as a response to the fact that entrepreneurs still do not get adequate support or resources for their startups. The Accelerator Assembly expects to achieve this by managing an online community where entrepreneurs may share their experience, enabling accelerators to form a community and come together to workshops and events, ongoing research to improve available data on European web startups and accelerators and by bringing accelerators and policy makers at the same table to create connections (Startup Magazine [online], 2016).

Another program which is worth mentioning is the Entrepreneurship 2020 Action Plan. It is the Commission's response to challenges brought by the recent economic crisis. As it is underlined by the European Commission "it is a blueprint for action to unleash Europe's entrepreneurial potential, remove existing obstacles and revolutionize the culture of entrepreneurship in the EU. It aims to ease the creation of new businesses and to create a much more supportive environment for existing entrepreneurs to thrive and grow" (European Commission (b) [online], 2018).

The Entrepreneurship 2020 Action Plan comprises three major areas in which the immediate intervention is desirable (European Commission (b) [online], 2018):

1. Entrepreneurial education and training in order to enforce growth and business creation;
2. Removal of existing barriers and supporting entrepreneurs in crucial phases of a lifecycle;
3. Rebuilding the culture of entrepreneurship in Europe and raising up a new generation of entrepreneurs.

The next European Union program which is dedicated to small and medium sized enterprises as well as to startups is Horizon 2020. It is the biggest EU research and innovation programme with nearly €80 billion available from 2014 till 2020. According to the European Commission "it promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market" (European Commission (c) [online], 2018). This is the financial instrument which implements the strategies of the European Union such as: Innovation Europe and Europe 2020.

#### **4. Startups' Ecosystem in Poland in Comparison to Selected European States**

The idea of startup initiatives in Poland is only few years old. During that time many grassroots undertakings have been created such as cyclical conferences aimed at the startup environment, acceleration trainings, education and networking meetings or programming marathons. Brands such as Startup Weekend, Aula Poland, Tech Camp, Geek Girls Carrots, Netcamp, East Camp or Lub Camp are just a few examples of regional ecosystem leaders who contribute to the development of the startup community. This also includes nationwide projects such as the e-Business Academy organized by the Polish Agency for Enterprise Development. Today's image of startups' ecosystem in Poland indicates that it is still developing and it has been making much progress although still differentiated (Rostek, Skala, 2017). The need to create efficient ecosystem is powerful which is illustrated by a number of initiatives aimed at enabling the free flow of knowledge, ideas and creating a back-up in the form of a network of contacts and investments in order to create an efficient digital market in Poland (Skala, 2016). A number of large startup centers have been established in Poland for example in Warsaw, Gdańsk,

Poznań and Kraków, where such initiatives as meetings, conferences, competitions, incubation and acceleration programs develop. Lack of capital is a kind of glass ceiling for the Polish ecosystem. This does not mean, however, that Poland is doomed to failure. Optimism lies in the concentration of technology produced on the Polish market, because it is an element without which capital itself will not succeed. The Polish market needs to understand what the financing process is and learn that the current market practice which is spending almost exclusively public money does not have much in common with investing, which is characterized by increased risk. The Polish investment ecosystem is constantly growing. Thanks to EU programs, a network of over 70 seed funds and 16 venture funds was created. As part of the ecosystem, there are also more than 40 funds associated in the Polish Association of Capital Investors. In the entire European Union Poland belongs to the countries with the highest number of enterprises. According to the Central Statistical Office (GUS) data, the number of small and medium-sized enterprises increases by a dozen or so percent year on year. It is in the small and medium-sized sector that start-ups are being created for inventiveness, innovation and self-denial of mostly young people. Over the last years a business culture has developed with which people interested in combining technology and business are particularly identifiable. Dynamic development, especially in the IT and new technologies industry resulted in the crystallization of a specific start-up ecosystem. It consists of many factors, none of which, analogically to the natural environment can be effectively developed in isolation from others. It includes: enterprises in the initial stage of development, universities providing specialists, venture capital institutions and private investors (venture capitals, seed capitals, business angels, accelerators), government and local government institutions (education and financing initiatives), human capital (educational institutions, universities, incubators), media, events, co-working spaces and all initiatives that affect the dynamics of this environment.

According to the European Startup Monitor European (ESM) startups are distinguished by the pace of development and are key players in building a globally competitive European digital economy. A survey of European startups which was carried out in 2016 showed that after 2.5 years technology companies employ on average 13 employees and within a year are ready to accept 7 more (European Startup Monitor [online], 2018). The ESM details the situation of European startups, identifies challenges specific to each country and Europe. The document emphasizes the growing influence of young enterprises on the entire European economy and indicates that through the development of innovation and the growth of startups, they ensure the competitiveness of the European economy, while creating thousands of jobs. The survey shows that the majority (almost 65%) of the founders of Polish startups are people between 25 and 34 years old. This is a high score compared to other EU countries where young entrepreneurs make up less than half (European Startup Monitor [online], 2018). The average age of Polish startups does not exceed 2 years. This gives Poland the third place in Europe among the youngest enterprises right after Romania (1.3 years) and Italy (1.7 years). However, startups assess their situation not well against similar EU companies. Answering the question on current business situation, half of Polish startups are negative. Only 13.2% of Poles declare that their situation is "good", compared to 36.3% Europeans according to the European Startup Monitor (European Startup Monitor [online], 2018). The report also shows that in Poland 95.4 percent employees and 94.9 percent startup founders are native citizens. This is a high result compared to other EU countries where already 12 percent of founders and successively 32 percent of employees come from countries other than the founding country. Looking at the results one can conclude that cultural pluralism generates a much greater potential for innovation and productivity. The startup capitals of Europe like London and Berlin have the most international employees. Over one third of companies claim that the capital that will accumulate during the next year will amount to a maximum of 1 million euros and nearly a quarter plan revenues between 1 and 5 million euros. The highest level of turnover which is

more than EUR 500,000 was achieved only by 7.4% of Polish companies. This is three times lower compared to startups from other EU countries. Revenues of 74% of Polish startups do not exceed EUR 50,000 annually (European Startup Monitor [online], 2018).

The European Startup Monitor was developed on the basis of a survey carried out among 15 different EU Member States (EU) and Israel. Over 2,300 companies took part in the survey, representing over 31,000 employees in total. In the future the report will be published by the European Startup Network an umbrella organization founded by 15 different startup associations from all over Europe including Startup Poland.

## **5. Conclusion**

For the European Union it is essential to create an entrepreneurial framework in which big ideas can grow. Whilst much is happening at the national level there is a need for more coherent action at European level. The above presented solutions introduced by the European Union are the steps taken in the right direction toward creation of the Digital Single Market. Below there are some recommendations which may be taken into deeper consideration during the process of building the coherent European business environment for startups as it is also emphasized by the European Young Innovators Forum (EYIF, 2018). These are as follows:

1. Ensuring the availability of financing for entrepreneurs. In order to encourage financial support for entrepreneurs the European Union should simplify the regulations in the area of alternative financing and expand European programs which are funding entrepreneurs as well as encourage venture capital investments in Europe.
2. Simplification of startups building. There is nowadays a great deal of incompatibility in terms of company types and registration procedures in Europe. This makes the creation of startups difficult and may also create long-term difficulties in attracting investment. As a remedy to this the European Union should accelerate the process of harmonization in the field of company law with the aim of creating a single European private company which would act as the main tool for the incorporation of startups. This includes the harmonization and digitalization of registration procedures as well as harmonization of minimum capital requirements and simplification of the existing VAT regulations.
3. Improvement of the entrepreneurial exchange. The large number of efforts have been taken on the national level to attract foreign entrepreneurs and provide national entrepreneurs with experience from abroad. However the European action on this regard should be reinforced in order to support national measures and make them more efficient. As an example the extension of the European Union Blue Card to entrepreneurs should be offered. Policies should continue to encourage foreign entrepreneurs to relocate to Europe and encourage European entrepreneurs to gain experience outside of Europe to improve their European businesses and boost the innovation process.
4. Ensuring the e-skills. The European Union suffers from a deficit in digital skills to support in particular developing digital startups. This creates gaps in the job market which could be filled by the growing number of unemployed remaining in many Member States. The European Union thus needs to enhance the campaign to equip the labour market with the necessary digital skills.
5. Elimination of the geo-blocking. Services continue to be confined to national borders and far too often consumers are not able to access content when they move from member state to another member state. This is particularly true in the case of the audio-visual sector. To ensure these services are available as uniformly as possible the Digital Single Market strategy should be continued with regard to improvement



of the copyright law and implementation of the European standard in this respect. This should be supplemented by the competition policy ensuring the prohibition of agreements for licenses which prohibit sales of services outside licensed territories.

The future research on startups in the European Union should focus on the dynamics of their development in European conditions and their impact on the economy of European Union as well as individual member states.

## References

- [1] Barcik, A. (2016), Co-opetition of Enterprises in Terms of the European Competition Policy [in:] Kovářová, E., Melecký L. and Staničková M. (eds.). *Proceedings of the 3<sup>rd</sup> International Conference on European Integration 2016*. Ostrava: VŠB- Technical University of Ostrava, 2016, pp. 65-71
- [2] Blank S., Dorf B. (2012), *The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company*, K&S Ranch, Incorporated
- [3] Dziwiński P. (2016), Restructuring of Small and Medium-Sized Enterprises – the European Perspective. [in:] Kovářová, E., Melecký L. and Staničková M. (eds.). *Proceedings of the 3<sup>rd</sup> International Conference on European Integration 2016*. Ostrava: VŠB- Technical University of Ostrava, 2016, pp. 190-196
- [4] European Commission (a) (2018), *Startup Europe: building the ecosystem* [online]. [cit.2018-23-02]. Available: <https://ec.europa.eu/digital-single-market/en/startup-europe-building-ecosystem>
- [5] European Commission (b) (2018), *The Entrepreneurship 2020 Action Plan* [online]. [cit.2018-23-02]. Available: [https://ec.europa.eu/growth/smes/promoting-entrepreneurship/action-plan\\_en](https://ec.europa.eu/growth/smes/promoting-entrepreneurship/action-plan_en)
- [6] European Commission (c) (2018), *Horizon 2020* [online]. [cit.2018-23-02]. Available: <https://ec.europa.eu/programmes/horizon2020/>
- [7] European Young Innovators Forum (2018), [online]. [cit.2018-23-02]. Available: <http://younginnovator.eu/>
- [8] European Startup Monitor (2016), [online]. [cit.2018-23-02]. Available: <http://europeanstartupmonitor.com/>
- [9] Krajcik V. (2015), Startup Ecosystem in the Czech Republic, [in:] *Proceedings of the 11<sup>th</sup> International Conference on Strategic Management and its Support by Information Systems*, Uherske Hradiste, Czech Republic, pp. 55-65
- [10] Mynarzová, M., R. Kaňa, M. Okręglicka.(2016), Selected Aspects of Public Support for Small and Medium-sized Enterprises in European Union through the Prism of Block Exemption Regulation [in:] *Proceedings of the 1st International Conference Contemporary Issues in Theory and Practice of Management CITPM 2016*. Czestochowa University of Technology, Faculty of Management, pp. 294-301
- [11] Mynarzová, M., Štverková H.,(2015), Public Support as an Important Factor for Competitiveness of SMEs in the European Union. [in:] *Zborník vedeckých prác Aktuálne problémy podnikovej sféry*, Ekonomická Univerzita Bratislava, Fakulta podnikového manažmentu, Katedra podnikovohospodárska, pp. 452-461

- [12] Osterwalder A., Pigneur Y., (2010), *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*, Onepress
- [13] Ries E. (2011), *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*, Penguin Books Ltd.
- [14] Robehmed N. (2013), What is a Startup? [online]. [cit.2018-23-02]. Available: <https://www.forbes.com/sites/natalierobehmed/2013/12/16/what-is-a-startup/#fb9722640440>
- [15] Rostek K., Skala A., (2017), Differentiating Criteria and Segmentation of Polish Startup Companies [in:] *Problemy Zarządzania – Management Issues*, Vol. 15 Issue: 1, Part I, pp. 192-208
- [16] Skala A. (2016), Statement on the First Research on Digital Startups in Poland, [in:] *Advancing Research in Entrepreneurship in the Global Context, 8th International Scientific ENTRE Conference*, Krakow, pp. 983-993
- [17] Startup Hubs Europe (2018), *Mapping Europe's startup ecosystem*, [online]. [cit.2018-23-02]. Available: <http://www.startuphubs.eu/>
- [18] Startus Magazine (2016), Cataniciu A., *Is The EU Supporting Its Startup Ecosystem Enough?* [online]. [cit.2018-23-02]. Available: <https://magazine.startus.cc/eu-supporting-startup-ecosystem-enough/>

## **Institutional Determinants of the Competitiveness of EU and Non-EU Central and Eastern European Countries**

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### **Abstract**

*This article attempts to determine the importance of institutions (institutional environment) for the international competitiveness of EU and non-EU CEE economies. The key research problem is to answer the question of whether the existing advancement of institutional transition processes, as exemplified by the quality and efficiency of institutions in these countries, determines the international competitive position of their economies. The main thesis is that there are significant differences between EU and non-EU CEE countries in the quality and efficiency of their economic institutions, which is directly attributable to the advancement of institutional transition processes in these countries, as determined by socio-economic and political factors (including their ambitions to become an EU member state or their actual EU membership itself). However, the institutional environment in these countries, which sets the conditions for doing business in them, determines their competitiveness on the international arena.*

**Keywords:** CEE countries, institutions, institutional competitiveness, institutional transformation

**JEL Classification:** D02, O17, O43

### **1. Introduction**

The progressing globalisation, the ICT revolution and the internationalisation of economic activity in the modern world economy, which is accompanied by intensified cooperation (competition + cooperation) of business entities on an international scale, necessitate major changes in the way and extent of economies' competing on the international arena (Hämäläinen, Elgar, 2003). These changes concern not only the general nature of contemporary international competitiveness, but also the role and importance of factors determining this competitiveness (Staničková, 2014). Nowadays, factors of lesser or underestimated significance, such as the quality of human capital, the level of development and quality of infrastructure, especially the soft infrastructure responsible for creation and diffusion of knowledge, the innovativeness of the economy, as well as the efficiency and effectiveness of broadly understood institutions, which are especially important from the point of view of the subject of this article, play a much greater role than it was only a few decades ago (Miozzo, Walsh, 2010; Fagerberg, 1996). Moreover, the institutional quality is also of considerable importance for the level of socio-economic development of individual countries, and to a large extent determines differences in this respect between them (Acemoglu, Johnson, 2005).

Amidst the growing interest of economists in the influence of institutions on the international competitiveness of economies, it is worth looking at this issue in relation to the countries of Central and Eastern Europe (hereinafter: the EU and non-EU CEE countries). The countries of this region, all without exception painfully experienced by communism and the system of a centrally planned economy, and then forced to undergo a systemic transition at the turn of the 1980s and 1990s, are nowadays widely diverse. They fall into two main groups: 1) the countries that are EU members, which have successfully managed to transform their economies into market economies and their political systems towards pluralistic democracy, i.e. Poland, Hungary, the Czech Republic, Slovakia, the Baltic States (hereinafter: EU CEE countries) and 2) those that for various reasons (mainly political) are outside the EU, i.e. Belarus, Moldova, Russia, and Ukraine (hereinafter: non-EU CEE countries), in which these transition processes have never been successfully completed. The fundamental differences also concern the broadly understood institutions, and it is precisely the analysis of these differences (which are the differences in the advancement of the so-called institutional transition in these countries) with regard to their potential impact on the competitiveness of their economies that will be analysed in this article.

This article sets forth the thesis that the quality and efficiency of economic institutions varied greatly between the EU and non-EU CEE countries, which is a direct consequence of the advancement of institutional transition processes in these countries, dependent on socio-economic and political factors (including their aspiration to become EU members or their actual EU membership). The institutional environment present in these countries, which sets the conditions for doing business in them, in turn determines their international competitiveness in a significant way.

## **2. The Role of Institutions (Institutional Transition) in Shaping the International Competitiveness of Economies - Theoretical Approach**

For the purposes of this article, when defining the notion of international competitiveness of an economy, it is worth recalling the relevant OECD (2005) definition, according to which it should be understood as the ability of an economy to compete fairly and effectively in international markets for goods and services, which consequently leads to an improved standard of living of its citizens in the long term. The European Commission, on the other hand, defines it as a nation's capacity to ensure consistent improvement in living standards for its citizens, providing jobs to those willing to work (European Commission, 2010). In this article, the notion of international competitiveness of an economy is defined as the ability of a given country, understood as the whole socio-political and economic system, to obtain certain competitive advantages in terms of international input markets and outlets for goods and services, as well as their permanent improvement amid the dynamically changing international environment.

The actual competitive position of a given economy in the realities of a modern, strongly globalised and internationalized world economy is increasingly dependent not so much on the quantity of the production factors possessed, but rather on the efficiency of their utilization. Therefore, in this respect the key role is played by the qualitative features of the entire socio-political and economic system, determined by the quality of human capital, innovativeness of a given economy and, above all, the efficiency of institutions (the efficiency of the so-called institutional environment within which all business entities operate in a given country) (World Economic Forum, 2017).

As in the case of the notion of international competitiveness, it is not easy to define unambiguously the notion of institutions, which has been pointed out by i.a. Nelson (2008). Thus, in accordance with the so-called New Institutional Economics (NIE), institutions are understood as all permanent, legal, organisational and customary conditions for repetitive patterns of human behaviour and interpersonal interactions (Pejovich, 1995). In turn, the World Bank (2002) defines institutions as standards, rules of conduct, contract enforcement mechanisms and organisations for doing market transactions that assist in the flow of information, in the enforcement of property rights and contracts and regulate competition in the market. Also, North's (1990) definition of an institution should be referred to in here, according to whom institutions should be understood as rules of the game in society, and more formally, humanly created constraints that structure human interactions. For the purposes of this article, institutions (institutional environment) will be understood to mean a certain set of rules of the game, principles, procedures, as well as moral and ethical standards regulating the behaviour of economic units, while at the same time ensuring the maximisation of certain benefits (e. g. wealth or increased competitiveness) from functioning within a given community (a given system).

In the case of post-communist countries, the above mentioned efficiency of institutions is a direct consequence of the advancement of the so-called institutional transition processes, i.e. the progress made in transition from the communist system of a centrally managed economy towards the system of a democratic market economy in terms of key principles and values, which are the basis for functioning of broadly understood institutions, regulating formal or informal social, economic and political relations in a given country (Falkowski, 2016). In turn, the well-known Polish economist and creator of the success of the Polish transition, L. Balcerowicz (2009) defines the process of institutional transition as fundamental changes in both formal and informal institutions necessary to achieve the so-called "critical mass" of systemic transition in post-communist countries. It is therefore an inherent element of this transition, which consists of both economic and political transition, in a fundamental way determining its final result.

There is no doubt that institutions, which determine the principles of and conditions for doing business in a given country, both public and private, as well as formal and informal ones, are of fundamental importance for the competitiveness of its economy and, consequently, for its socio-economic development.

First of all, institutions (the institutional environment existing in a given country) have a fundamental influence on the level of transaction costs and systemic business risk. The higher the quality and efficiency of the institutions, the lower the transaction costs and systemic risk, and the greater the country's ability to compete internationally (Rodrik, Subramanian, Trebbi, 2004).

The exceptional importance of institutions (institutional environment) for the competitiveness, as well as for the development of a given economy, is also emphasized by the widely understood New Institutional Economics (NIE), according to which institutions are treated as crucial economic resources of non-economic nature (Oppen, 2008). North (1990), in turn, believes that institutions in general, and in particular their quality (stability, transparency, efficiency), are a factor which in the long run has influence on the – prioritised in this approach – accumulation of human and physical capital, stimulating the necessary technological progress and the innovativeness of a given economy, and thus also its international competitiveness.

To sum up, undoubtedly the importance of institutions (institutional environment) for the international competitiveness of individual countries is vital. Their impact on the said

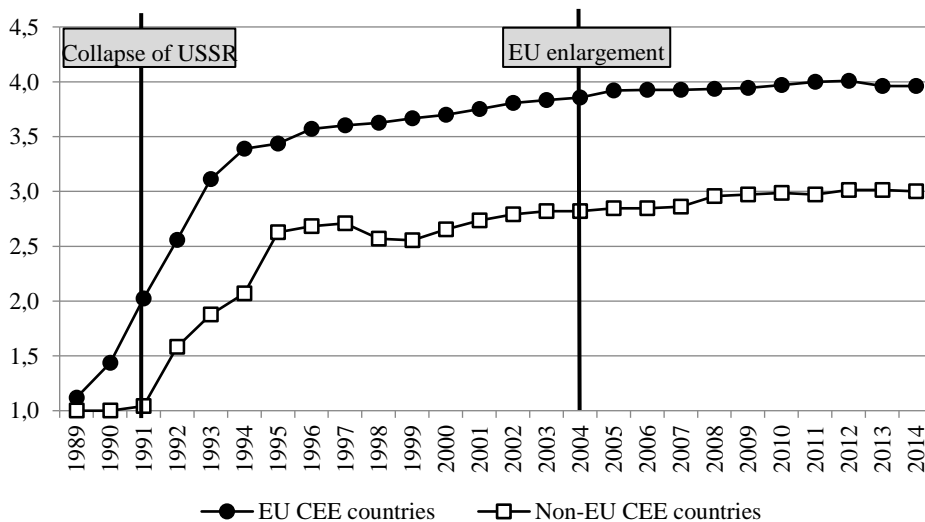
competitiveness can be *de facto* twofold (because it is hard to imagine in practice the neutral impact of institutions on competitiveness), i.e. they can:

- a) improve international competitiveness by increasing the efficiency of the operations of the entire political, and socio-economic system in a given country, primarily by reducing transaction costs of doing business in that country and increasing the productivity of input factors, which will necessarily increase its competitive capacity and, consequently, also its competitive position on the international arena;
- b) deteriorate international competitiveness by reducing the afore-mentioned efficiency of the operations of the entire political, and socio-economic system in a given country, which, as a result, will generate an undesirable phenomenon of wasting the resources possessed and, consequently, lower its competitive capacity position on the international arena.

### 3. Progress in the Institutional Transition in EU and Non-EU CEE Countries and Their International Competitiveness

The present quality of institutions (institutional environment) in EU and non-EU CEE countries is a direct consequence of the advancement of institutional transition processes initiated in them after the fall of communism at the turn of the 1980s and 1990s. The scope and effectiveness of reforms in the area of institutional changes in the so-called transition countries is assessed by experts of the European Bank for Reconstruction and Development (EBRD). Until 2014 inclusive, they evaluated, using a uniform methodology, the advancement of institutional changes towards liberal principles specific to the market economy in terms of changes in the ownership structure (so-called small and large privatisation), management and restructuring of enterprises, price liberalisation, trade and financial markets, as well as competition policy.

**Figure 1: Advancement of Institutional Transition in EU CEE Countries and Non-EU CEE Countries in 1989-2014\* (Overall Score, Max. 4.3)**



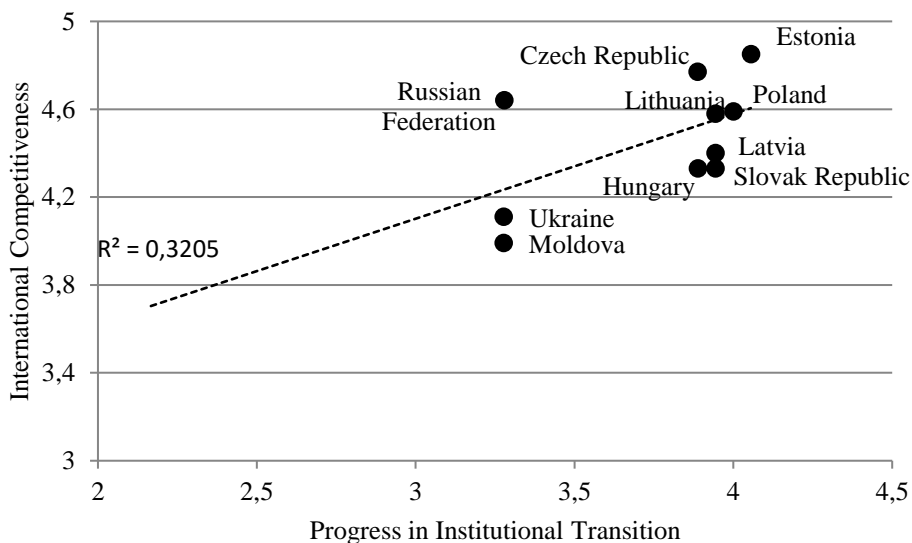
\* The latest data are available for 2014.

Source: Author's own calculations based on the EBRD data.

If, using the relevant EBRD data, we look at the general level of institutional transition processes (including institutional changes in all the five institutional environment areas indicated above) among the analysed EU and non-EU CEE countries, we immediately notice significant differences in this respect (Figure 1).

The EU CEE countries (i. e. the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Slovakia), despite some minor differences between them, have made much greater progress in transforming their institutions towards liberal market economy than the non-EU CEE countries (i. e. Belarus, Moldova, Russia, and Ukraine). Moreover, institutional changes in the EU CEE countries were faster and deeper than in the non-EU CEE countries. A very important accelerator of these changes were, of course, the efforts of these countries to become EU members, with the basic conditions of their EU membership, as laid down in the 1993 Copenhagen criteria, being to have market economies, as well as to adapt their legal system to the *acquis communautaire* of the EU. The year 2004, the date of accession of all the analysed countries from Central Europe to the EU, therefore represents a pivotal point in the course and advancement of institutional changes in these countries.

**Figure 2: Advancement of Institutional Transition in EU and Non-EU CEE Countries vs. their International Competitiveness**

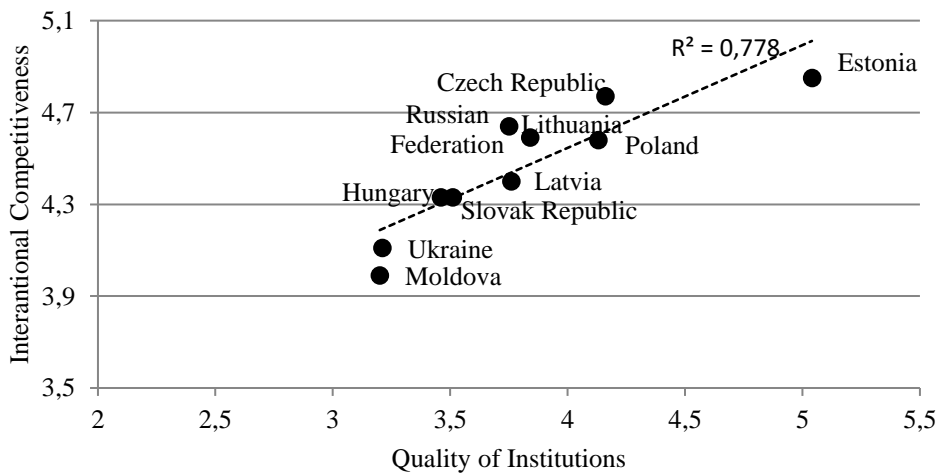


Source: Author's own calculations based on (World Economic Forum, 2017), (EBRD database)

Now, if we relate the advancement of institutional transition processes in the EU and non-EU CEE countries (as measured by the value of the Transition Index, according to EBRD data) to their international competitiveness (as determined by the Global Competitiveness Index, compiled by the World Economic Forum), it will turn out that, in principle, countries with more advanced institutional transition are also much more competitive in the international arena and *vice versa* (Figure 2). The exception is Russia, which – despite being at the level as low as Ukraine and Moldova in terms of institutional changes – still possesses much higher international competitiveness not only as compared to these two countries, but even to some EU CEE countries with more advanced transition. This should be explained by the size of the country's economy, its socio-economic potential, but, first and foremost, by the resources-

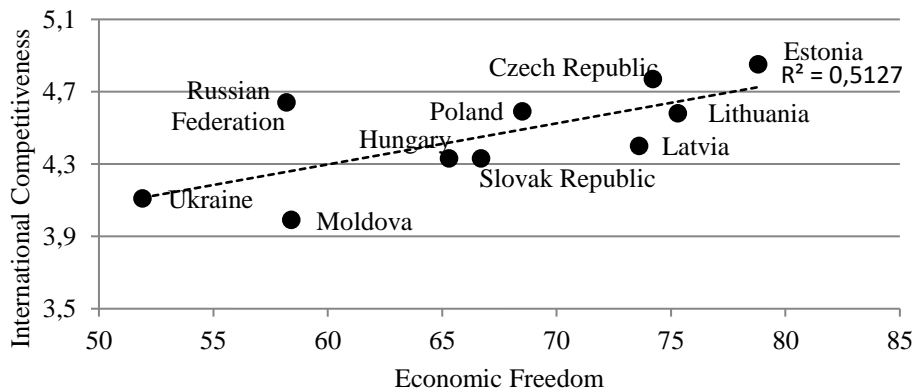
based character of its economy and the resulting revealed comparative advantages in international trade (Falkowski, 2017). Due to the lack of data on Belarus' international competitiveness, this country has regrettably been omitted from this and subsequent analyses. Next, when we look more broadly than before at the institutions (institutional environment) present in the EU and non-EU CEE countries, resulting from the institutional transition analysed above (as evaluated according to the methodology of the World Economic Forum (World Economic Forum, 2017)) and relate them to the international competitiveness of their economies, this operation will confirm the hypothesis of a strong correlation between these two variables, that is of a strong impact of institutions on the competitiveness (Figure 3). Additionally, a high  $R^2$  factor is also noticeable in this case.

**Figure 3: Quality of Institutions in the EU and Non-EU CEE Countries vs. their International Competitiveness**



Source: Author's own calculations based on (World Economic Forum, 2017)

**Figure 4: Scope of Economic Freedom in EU and Non-EU CEE Countries vs. their International Competitiveness**



Source: Author's own calculations based on (World Economic Forum, 2017), (Heritage Foundation, 2017)



An important testimony to the quality of institutions (institutional environment) in EU and non-EU CEE countries is the scope of economic freedom. A relevant assessment of this scope is carried out annually by Heritage Foundation by compiling the so-called Index of Economic Freedom, in which 12 main areas are evaluated: property rights, government integrity, judicial effectiveness, government spending, tax burden, fiscal health, business freedom, labour freedom, monetary freedom, trade freedom, investment freedom and financial freedom (Heritage Foundation, 2017).

If we relate the scope of the said economic freedom to the international competitiveness of individual EU and non-EU CEE countries (Figure 4), then once again it will turn out that countries with solid, strong, transparent and effective institutions are characterized by much greater international competitiveness and *vice versa* (with the exception of Russia, for the reasons explained earlier).

#### 4. Conclusion

The analysis carried out in this article clearly shows that the EU and non-EU CEE countries differ strongly in terms of the quality and efficiency of economic institutions, which is directly attributable to the advancement of institutional transition processes in these countries. The development of these processes, and thus the present institutional quality, was influenced by both socio-economic as well as political factors. Adaptation processes in the area of institutions in several CEE countries connected with their accession to the EU structures also played an important role in this respect. Moreover, their international competitiveness is highly dependent on the institutional environment present in all CEE countries, which sets the conditions for doing business in them.

Completing the institutional changes in non-EU CEE countries seems to be a prerequisite for improving their international competitiveness. Only then will it be possible to expect a real improvement in the quality of the human and physical capital possessed by them, stimulating the required technological progress and innovativeness necessary to improve their international competitive position. Unfortunately, this process, if at all possible, will be extremely difficult and socially costly. It cannot reasonably be expected that – in completely different geopolitical conditions than those pertaining to institutional changes in the EU CEE countries – the non-EU CEE countries will quickly and effectively repeat the transitional success of the former.

#### References

- [1] Acemoglu, D., and Johnson, S. (2005). Unbundling institutions. *Journal of Political Economy*, vol. 113, iss. 5, pp. 949–995.
- [2] Acocella, N. (2005). *Economic Policy in the Age of Globalisation*. Cambridge: Cambridge University Press.
- [3] Aslund, A. (2002). *Building Capitalism. The Transformation of the Former Soviet Bloc*. Cambridge: Cambridge University Press.
- [4] Balcerowicz, L. (2009). Institutional Change After Socialism and the Rule of Law. *Hague Journal on the Rule of Law*, vol. 1, iss. 2, pp. 215–240.
- [5] European Commission (2010). *European competitiveness report 2009*. Luxembourg: Publications Office of the European Union.

- [6] Fagerberg, J. (1996). Technology and Competitiveness. *Oxford Review of Economic Policy*, vol. 12, iss. 3, pp. 39-51.
- [7] Falkowski, K. (2017). Long-Term Comparative Advantages of the Eurasian Economic Union Member States in International Trade. *International Journal of Management and Economics*, vol. 53, iss. 4, pp. 27–49.
- [8] Falkowski, K. (2016). Testing the CEEs' model of transformation in the ENP framework: challenges and opportunities: the Eastern Dimension. *Yearbook of the Institute of East-Central Europe*, vol. 14, iss. 6, pp. 9–25.
- [9] Hämmäläinen, T.J. and Elgar, E. (eds.) (2003). *National Competitiveness and Economic Growth. The Changing Determinants of Economic Performance in the World Economy*. Cheltenham: Edward Elgar.
- [10] Heritage Foundation (2017). *Index of Economic Freedom: Trade and Prosperity at Risk*. Washington: Heritage Foundation.
- [11] Jeffries, I. (1993). *Socialist Economics and the Transition to the Market. A Guide*. London and New York: Routledge.
- [12] Miozzo M. and Walsh V. (2010). *International Competitiveness and Technological Change*. New York: Oxford University Press.
- [13] Nelson, R.R. (2008). What Enables Rapid Economic Progress: What Are the Needed Institutions?. *Research Policy*, vol. 37, pp. 1-11.
- [14] North, D.C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- [15] OECD (2005). *OECD Glossary of Statistical Terms* [online]. [cit.2018-03-04]. Available: <http://stats.oecd.org/glossary/detail.asp?ID=399>.
- [16] Opper, S. (2008). New Institutional Economics and its Application on Transition and Developing Economies. In Brousseau, E. and Glachant, J.M. (eds.). *New Institutional Economics. A Guidebook*, Cambridge: Cambridge University Press, pp. 389-406.
- [17] Pejovich, S. (1995). *Economic Analysis of Institutions and Systems*. Dordrecht: Kluwer A.P.
- [18] Portes, R. (1993). From Central Planning to a Market Economy. In Islam, S. and Mandelbaum, M. (eds.). *Making Markets. Economic Transformation in Eastern Europe and the Post-Soviet States*, New York: Council on Foreign Relations Press, pp. 16-52.
- [19] Rodrik, D., Subramanian, A., and Trebbi, F. (2004). Institutions rule: The primacy of institutions over geography and integration in economic development. *Journal of Economic Growth*, vol. 9, iss. 2, pp. 131–165.
- [20] Staničková, M. (2014). Competitiveness Factors in Regional Growth: the Case of Central and Eastern European Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 634-643.
- [21] World Economic Forum (2017). *Global Competitiveness Report 2017-2018*. Geneva: World Economic Forum.
- [22] World Bank (2002). *Building Institutions for Markets*. Washington: World Bank.

## **Brexit – An Opportunity for the United Kingdom to Escape from EU Law and Related Challenges**

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### **Abstract**

*Brexit has been presented in the United Kingdom as an opportunity to escape the Court of Justice of the European Union and EU law in general. However, the principle of legal certainty precludes EU law from losing all legal effect in the territory of UK in the very moment of withdrawal from EU. EU law will continue to bind individuals and confer rights on them at least for some time, albeit on different legal basis. Determining the scope of application of EU law after Brexit in the UK, is not only a matter for UK and EU negotiators to agree on a sensible arrangement of future relations, it is also a challenge for lawyers. The paper also briefly outlines possible scenarios of future involvement of the UK in economic structures on the European continent, and more specifically deals with the question of applicability of EU law in case United Kingdom becomes a member of the European Economic Area.*

**Keywords:** *Brexit, European Union, Court of Justice of the European Union, European Economic Area*

**JEL Classification:** *K33, K40, K15*

### **1. Introduction**

Before the Brexit referendum, in the United Kingdom we might have heard in media that leaving the European Union is a possibility to escape the constraints of EU law and regain full sovereignty, which essentially means taking back control of the rules which apply on the UK territory. Now, almost two years after, the rhetoric remains. Brexit has also been presented as an opportunity to escape the bulky case law of the activist EU Court of Justice (“CJEU”). Special attention to court’s case law is paid because United Kingdom is the home of judicial law-making and court decisions are openly acknowledged as formal source of law. On the continent we rather blame the legislator for bad rules, not judges. In the UK court cases traditionally matter more than in continental Europe.

Currently it seems highly probable that United Kingdom will indeed withdraw from the European Union, that UK will not retract its announcement of exit made according to Art. 50 Treaty on European Union (“TEU”). It is unclear what will be the terms of the exit. It is clear that leaving the EU poses a threat to UK, its economy and citizens and their rights on the one hand and opportunities for change in many areas on the other (Ševčíková, 2016).

There are two elements that will be of major importance – Great Repeal Bill, an act which will end the direct effect of EU law on the UK territory by repealing European Communities Act from 1972, and the withdrawal agreement between UK and EU which shall terminate the membership of the UK in the EU and provide for settlement of mutual rights and obligations

and establish future relations between UK and EU. Naturally, conclusion of other international treaties between UK and EU concerning future relations may and probably will follow.

The content of both the Great Repeal Bill and the withdrawal agreement is significant from the legal, economic and political perspective. The aim of this paper is to deal with the question what impact will the EU law have on the UK territory after the Brexit.

Instantaneous abandonment of all law that is somehow related to EU law would lead to immense gaps in law since some areas of law are formed purely by EU law, others are strongly Europeanized. Depriving Treaty provisions and regulations from having binding effect on the UK territory would theoretically be possible, in case of directives which are effective in the UK in the form of acts of Parliament or secondary legislation, it is impossible both theoretically and practically.

In the first part of this paper I will try to describe the form of Brexit on national level, consequences of Brexit for UK legal order and analyse problematic aspects as regards effects of EU law including the effects of case law of the EU Court of Justice. I will not deal in more detail with Brexit from the EU law or public international law perspective, i.e. with the withdrawal agreement between EU and UK. In the second part of the paper I will briefly outline possible scenarios of future involvement of the UK in economic structures on the European continent and deal with one of the scenarios in detail, namely with involvement in the European Economic Area. For writing up of this paper I will use mainly descriptive and analytical method, partly also comparative method.

## **2. Conversion of EU Law into UK Law**

The key piece of legislation in the UK will be the Great Repeal Bill. Its aim will be to abolish the European Communities Act 1972 (“ECA”) and stipulate transitional provisions for application of EU law after Brexit.

In March 2017 the UK Government published the White Paper for the Great Repeal Bill which contains key rules that are going to govern the status of EU law in the UK. The European Union (Withdrawal) Bill 2017-19, which is the official name for the Great Repeal Bill, is currently debated in the UK Parliament (as to 28<sup>th</sup> February 2018).

The key points of the legislative proposal as regards validity of EU law post-Brexit are:

- Repeal of the ECA
- Conversion of EU law into UK law
- Creation of powers to make secondary legislation

The ECA, i.e. European Communities Act 1972, has been enacted to incorporate the EU law into UK legal order. It enables EU law to have direct effect in the UK and primacy over UK law. Therefore it has to be repealed in order that UK institutions regain all its powers that are vested in the EU institutions.

It is also necessary to give delegated powers to the Government to make secondary legislation since by exiting the EU there will be need to adapt current legislation – remove references to EU institutions and obligations towards the EU that will no longer be applicable and other corrections for the sake of legal clarity and legal certainty.

Due to large number of EU acts that are to date applicable in the member states including UK, it is virtually impossible to replace the legislation with domestic legislation prior to the date of exit. If domestic law changed rapidly on the day of Brexit, it would have an enormous impact

on life in the UK. It would considerably affect trade within the UK and outside. It would be undesirable and quite probably also constitutionally unacceptable.

The only sensible way in this situation therefore is to convert EU law into UK law and make desired changes gradually. This is the approach taken by the UK Parliament.

The Great Repeal Bill (“GRB”) is going to preserve the EU-derived domestic legislation (i.e. Union legal measures which require implementation in member states, namely directives) as domestic law (s. 2 GRB).

As regards acts which are directly effective (namely regulations), they are going to be transformed into domestic law (i.e. they are not going to be copied one by one but there are going to be pronounced as sources of law for the UK) (s. 3 GRB).

It is not only the actual legal measures that matter, it is also essential to take into consideration how they are going to be interpreted and applied.

### ***2.1 Interpretation of EU Law***

On the EU level, the key player as regards interpretation of EU law is the Court of Justice. Member states’ courts have to follow its case law (CJEU, case 29/68). Main tool of the CJEU for achieving uniform interpretation of EU law is the preliminary reference procedure that enables member states’ courts to ask for an explanation or clarification as to correct interpretation of either a Treaty provision or a secondary law provision.

Court of Justice and its decisions, mainly preliminary rulings, have played an enormous role in the evolution of EU law. CJEU not only gives interpretation on all sources of law in the EU, it has also helped to shape the EU legal order as such.

Member states’ courts have to apply EU law in accordance with the interpretation which has been given by the CJEU earlier. They are not allowed to disregard CJEU case law. If a member state’s court deals with a question of EU law, which has already been resolved by the CJEU, it has to apply the CJEU case law or refer the case again to the Court of Justice (Koopmans, 1982). The court may not disregard CJEU decisions. Realistically, this means that EU Court of Justice judgments are given a sort of precedential effect.

### ***2.2 Status of CJEU Case Law after Brexit***

While this approach to Court’s judgments is still rather difficult to comprehend for many lawyers on the European continent, it is nothing unusual for UK lawyers. Since UK is a country with common law tradition, decisions of higher courts are considered as sources of law. Historically, it was the case law that has been perceived as the main and more important source of law (Kiralfy, 1990, pp. 1-5 and 91-98). Accepting the binding, or perhaps more precisely precedential, effect of the Court of Justice decisions has been natural for UK lawyers.

Consequently, it is understandable that the status of CJEU case law is dealt with in the Great Repeal Bill. The elemental rule is that retained EU law (i.e. UK law that originates in EU law and remains effective after exit day) shall be interpreted in accordance with CJEU case law prior to date of exit. Only the Supreme Court is not bound by it. At the same time should the Supreme Court wish to depart from a CJEU decision, it instructed to use the same test as it would apply in deciding whether to depart from its own case law (s. 6 GRB) which basically means that CJEU case law is given a position analogical to decisions of the UK Supreme Court. As a rule, UK Supreme Court is bound by its previous decisions given in factually similar

cases but it may depart from them ‘when it appears right to do so’ (The House of Lords, the predecessor of the Supreme Court, issued a Practice Statement in 1966 which is still applied. Practice Statement [1966] 3 All ER 77). Its practice in this respect is rather moderate; it departs from them only exceptionally in justified cases (Huxley-Binns, 2014, pp. 43-45).

On the other hand, CJEU decisions made after the exit day have no formal legal force but if a court finds it appropriate, it may take account of later CJEU case law too. Furthermore, UK courts may not refer a case to the Court of Justice after the exit day.

### **2.3 Problematic Aspects of Application Post-Brexit CJEU Case Law**

The Great Repeal Bill in its currently proposed wording is correct as to providing for the precedential effect of pre-Brexit CJEU decisions even if they are applied by a UK court after Brexit. Derogating their binding effect would cause confusion regarding correct interpretation and could lead to considerable uncertainty for individuals. However, it is arguable whether the rule confirming precedential effect of CJEU decisions should not be broader and cover also CJEU decisions given after Brexit which interpret EU law effective before Brexit. In other words, the decisive point for establishing whether a particular CJEU decision has precedential effect or not should not be the day of issue of the decision but the date when the dispute originates and to which legal measure it relates (and whether the wording of the legal measure, that is interpreted in the CJEU judgment, was effective before Brexit and thus was applicable also in the UK).

So if CJEU rules after Brexit on interpretation of an EU law provision that was effective before Brexit, UK courts should nonetheless follow the judgment, even in disputes that arose after Brexit on condition that the interpreted provision remained the same. So long as the EU-law derived provisions of UK law remain not amended or repealed, they should be interpreted equally as in the EU.

There is no sensible ground for the opposite solution, if the wording remains the same and if it does not collide with any other legal provision and nothing changes from the teleological perspective since the purpose of the legal regulation and intention of the legislator did not change because the provision simply originates in EU law.

In this situation the opposite solution, i.e. disregarding relevant CJEU case law, would disrupt the unity of the UK legal order and could have serious consequences on legal certainty and thus on the position of individuals.

Horsley claims that UK courts may incline to follow post-Brexit CJEU interpretations of EU law as a matter of practical expediency. At the same time he warns that UK judges may take advantage of their newly acquired freedom to depart from CJEU decisions in specific instances where they appear antagonistic to domestic legal principles or interpretative traditions (Horsley, 2017, p. 85). UK Supreme Court stated that after Brexit ‘*decisions of the Court of Justice will [...] be of no more than persuasive authority*’ (UK Supreme Court, [2017] UKSC 5, ‘Miller case’). This suggests rather reserved approach to CJEU case law, irrespective of the uncertainty that it may cause. The approach may naturally be affected later by the exact wording of the GRB and EU–UK withdrawal agreement that will become effective. It is yet to be seen how this proclamation will affect adjudication in specific cases in the future.

It is important to point out that the need to interpret UK law in euro-conform way even after Brexit does not come from EU law, because that will not be effective in the UK after Brexit, but it stems from general principles of law. Legal certainty and reasonable predictability of law are undoubtedly one of the principles that apply universally in legal orders that are

governed by the principle of rule of law. The requirement of certainty is also mentioned numerous times in UK Government's White Paper. It would therefore be logical to assume that the proposed European Union (Withdrawal) Bill will fully correspond to these principles. Eventually, it will be up to the courts what to determine their approach to CJEU decisions.

#### **2.4 Concluding Remarks on Conversion of EU Law into UK Law**

To conclude, it may be said that on the day of exit not much is going to change. In the short term, I expect virtually no changes in UK law too. In longer term, of course, the situation is going to be different. Much will depend on UK courts, how they are going to cope with the uneasy task of interpreting EU-derived law. Nevertheless, it is probable that the longer the time from the Brexit day, the bigger will be the willingness of UK courts to depart from the previous line of interpretation that originates in times of the UK membership in the EU. The same holds true for the Parliament – with time the number of repeals, amendments and new legislation will grow.

### **3. Withdrawal Agreement and Jurisdiction of CJEU**

An important point worth mentioning is that the withdrawal treaty concluded between the EU and the UK (if there is one and UK membership does not come to an end by expiration of the two-year period which is set out in Art. 50 TEU) may be subject to review by the EU Court of Justice according to the Art. 218 (11) Treaty on the Functioning of the European Union ("TFEU"), (for further details on the topic see European Parliament, Directorate General for Internal Policies, pp. 10-12). It is because the withdrawal treaty is an international treaty, even though it is specific since UK will still be an EU member state at the time when the treaty is concluded. Should the Court of Justice declare the agreement incompatible with Treaties, it could not enter into force before amendments are made to the Treaties or, in this scenario more likely, to the withdrawal agreement.

Another possible intervention to the process of withdrawing from EU may come from the Court of Justice – the agreement as an act of EU law may be subject to review of legality if action for annulment is brought to the Court of Justice (Svoboda, 2016). In this instance, the Court of Justice may declare it void in case it contains provisions contrary to EU Treaties.

In both cases it rather ironically holds true that the escape of the UK from the Court of Justice will eventually depend on review of the Court of Justice.

### **4. Options for EU-UK Trade Relations**

In the previous part it was shown that EU law and CJEU jurisprudence will continue to matter even after Brexit. The degree of influence of EU law will depend largely on future trade relations between EU and UK as it is most likely that both parties will endeavour to resolve them. Negotiating mutually profitable arrangement is especially challenging and uneasy task for both sides. Brexit poses a challenge not only for UK and EU representatives but also for private parties – for UK and EU migrant citizens, who now face insecurity about their future status, for businesses, which cannot plan their business activities accordingly, and for other actors, such as trade unions, that will try to guarantee that the level of protection of workers does not diminish (Gumbrell-McCormick, Hyman, 2017).

The need for an express arrangement of trade relations is particularly pressing on the side of UK since it is more dependent on trade with the rest of EU than the rest of EU is dependent on

UK. If there are barriers to trade between EU and UK, it will be UK that will bear significantly larger proportion of related costs (Belke, Gros, 2017 and Van Reenen, 2016). It is therefore expectable UK will seek access to EU internal market.

There are several options for mutual trade arrangements (European Parliament, Directorate General for Internal Policies). First of them is involvement in the European Economic Community (“EEA”) which represents direct participation in the EU internal market and thus it would be the ‘softest’ possible way of withdrawal from EU.

Second option is to join the European Free Trade Association (“EFTA”) without acceding to EEA Agreement, this option is often denoted as ‘Switzerland model’. Switzerland has entered into a number of bilateral treaties which govern various areas of trade including labour migration (Dhingra, 2016). This option would be more difficult to carry out for EU and UK compared to the first option (and it would naturally take considerably more time), on the other hand it allows larger flexibility.

Becoming a member of EU customs union is another possibility. It would simplify the access to the internal market but only to limited extent (European Parliament, Directorate General for Internal Policies). The greater independence to set its own trade policies and regulations for the UK, the greater will be the disruption for trade.

In the absence of any comprehensive trade arrangement, trade between UK and EU would be governed by WTO rules. This fourth possible option would undoubtedly represent ‘hard Brexit’ with all its benefits (no binding effect of EU law and CJEU decisions) and disadvantages (no preferential access to single market and consequent disruptions for trade).

#### ***4.1 European Economic Area***

Even though the future arrangement between UK and EU is yet unknown and hard to predict, in this chapter I will deal in detail with consequences of the first option as described above, namely UK membership in the European Economic Community.

For proper understanding of today's position of the EEA and its relation to EU, it is necessary to briefly mention its history. The EFTA was founded as a response to the economic success of the European Coal and Steel Community and European Economic Community in 1960. While at the beginning the EFTA and European Communities were comparable as to the number of member states, as years passed, it changed significantly. Nowadays, EU has 28 members (including UK), whereas EFTA has four (Norway, Lichtenstein, Iceland and Switzerland). EEA was formed on the platform of EFTA as a form of enhanced cooperation in 1994 and today has three members Norway, Lichtenstein and Iceland. Switzerland remained a member of the EFTA only.

European Economic Area was founded to extend the four internal market freedoms to the EFTA states (EFTA Court, case E-1/03). It gives an opportunity to participate in the internal market of the EU without being bound by numerous obligations connected to membership in the Union. The cooperation among states in the EEA is limited truly to economic issues. The preamble of EEA Agreement contains no reference to the ‘ever closer union among the peoples of Europe’ and the Agreement itself contains no provisions on citizenship.

Although this may seem as a mere technicality, it has fundamental impact on the law of EEA and the functioning of EEA and EFTA as such. The absence of an alternative to Union citizenship in the EEA has significant implications especially for the free movement of persons, namely for residence rights of non-economic migrants and the existence of positive obligations towards them from the host state.



Even more importantly, the notion of the ever closer union was used by the EU Court of Justice as an aid for inferring the specific character of the founding Treaties, creating the doctrine of direct effect and primacy of EU law (e. g. in the famous *Van Gend en Loos* decision) and thus contributed to the evolution of EU law as a supranational legal order. In contrast, EEA Treaty is an ordinary international treaty and law of EEA is governed solely by international law where principles such as primacy or direct effect do not apply (Frederiksen, 2009. However, opposite opinions may be found in legal doctrine. Baudenbacher claims that „*the EEA Agreement is closer to supranational EC law than to public international law*“ (Baudenbacher, p.2).

Most of legal measures concerning internal market that are adopted by the EU are then adopted by the EEA members. Although EEA members have no opportunity to vote in the Council or in the Parliament in the legislative procedure because this is reserved to EU members, it would be wrong to assume that they have no way to influence the outcome. They take part in consultation procedures prior to voting in the Parliament and Council (see Art. 99 et seq. of the EEA Agreement). The possibility of EEA members to influence legal acts issued by the EU is limited, but far from negligible.

When an EU act in the area covered also by the EEA is enacted, it is not automatically valid in the EEA. The procedure for cooperation between EEA members and EU as regards legislation is very specific (one may also say unique). New EU acts are scrutinized by the EEA Joint Committee, which is composed of representatives of the EU and of the three EEA members. After the approval of the Joint Committee the act is incorporated into an annex of the EEA Agreement and thus becomes a binding part of it. The Joint Committee Decision may include adaptations to ensure the compatibility with the specific regime of the EEA or and its members.

#### **4.2 EFTA Court**

For the purpose of securing uniform interpretation of the EEA Agreement, the EFTA Court has been founded. The jurisdiction of the EFTA Court entails among other things giving advisory opinions on the interpretation of the EEA Agreement (Art 31. et seq.). It is clear that the EFTA Court has its model in the EU Court of Justice.

The reason for it is the simple – it holds true for the whole EEA that it aims to mirror the European Union regarding the functioning of the internal market. The ‘mirroring’ applies not only to law-making but also to the judiciary. It is enshrined in the EEA Agreement which sets forth the principle of homogeneity and also procedures for safeguarding it (Art. 105 et. seq.<sup>1</sup>). Moreover, it expressly stipulates that EEA law shall be interpreted in accordance with the case law of the EU Court of Justice prior to signature of the EEA Agreement (Art. 6 et. seq.). To achieve homogeneity of EEA and EU law after the date of signature of the EEA Agreement, the system of mutual exchange of relevant decisions of the EFTA Court and CJEU is introduced, the system is carried on by the Joint Committee and is intended to ensure awareness about relevant court decisions on both sides – EU and EEA.

It follows from the institutional setting and related procedures that the decision-making of the EFTA Court is a powerful tool for achieving homogeneity too. Nonetheless, it is necessary to note that there are important differences between the EU and EEA preliminary reference procedure. EEA member states’ courts have no obligation to refer a question to the EFTA court and the ruling on interpretation of an EFTA act has no formal binding force for the referring court (Frederiksen, 2009, p.4). The ‘power’ of the EFTA Court is thereby lesser compared to its counterpart in the EU.

From the case law of both courts and from scholarly works on that topic we may see that cooperation between these courts works and they do influence each other. Sometimes it is the EFTA Court that mirrors CJEU case law, sometimes it is the CJEU that gains inspiration from the decisions of its counterpart, decisions of the EFTA Court have found their way to the Advocate Generals' opinions (Sehnálek, 2018, pp. 134-140; or Baudenbacher). Nevertheless, even though the relation between the two courts is parallel, the balance is shifted in favour of the EU Court of Justice (Sehnálek, 2018, p. 133). While EFTA Court is '*essentially [bound] to follow relevant [CJEU] case law*' (Baudenbacher, p. 1), there is no corresponding obligation for the CJEU (Sehnálek, 2018, p. 133).

As follows from the foregoing, if the United Kingdom actually exited the European Union and became a member of the European Free Trade Association and acceded the Agreement on the European Economic Area, it will not escape the EU internal market regulation and related case law of the EU Court of Justice. Most of EU legislation in the area of internal market would become binding for the UK, while the negotiating power during the EU legislative procedure would become considerably smaller. As the EFTA Court strives to achieve homogeneous interpretation of EEA law, it mostly adjudicates in accordance with CJEU case law.

## 5. Conclusion

Exiting from the European Union is no easy task to carry out. Consequences of the UK exit are yet hard to predict because much will depend on the content of the withdrawal agreement concluded between EU and UK and on subsequent agreement on future relations as well. UK legislator has the task to set transitional provisions for application of EU law in the UK post-Brexit era. UK courts will then have the task to bring it to life and deal with problematic aspects should they find some. EU law will preserve to have effects on the UK territory at least for some time after Brexit and the same holds true for the case law of the Court of Justice as it forms inseparable part of EU law. This is the only way that ensures legal certainty which is essential both for citizens and business. As regards future UK-EU trade relations, the greater the continuity and certainty for individuals, the lesser will be the independence for UK to set its own policies and regulations. If UK joins the European Economic Area, it will essentially be bound by EU legislation on internal market and CJEU case law interpreting it.

## References

- [1] Baudenbacher, C. *The EFTA Court Fifteen Years On*. [online]. [cit.2018-02-02]. Available at: [http://www.eftacourt.int/fileadmin/user\\_upload/Files/News/2009/15\\_Years\\_EFTA\\_Court.pdf](http://www.eftacourt.int/fileadmin/user_upload/Files/News/2009/15_Years_EFTA_Court.pdf).
- [2] Belke, A., Gros, D. (2017). The Economic Impact of Brexit: Evidence from Modelling Free Trade Agreements. *Atlantic Economic Journal*, vol. 45, iss. 3, pp. 317-331.
- [3] *Brexit and the European Union: General Institutional and Legal Considerations*. European Parliament, Directorate General for Internal Policies. [online]. [cit.2018-02-27]. Available at: [http://www.europarl.europa.eu/RegData/etudes/STUD/2017/571404/IPOL\\_STU\(2017\)571404\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2017/571404/IPOL_STU(2017)571404_EN.pdf)
- [4] *Brexit: the options for trade*. House of Lords, European Union Committee. [online]. [cit. 2018-02-27]. Available at: <https://publications.parliament.uk/pa/ld201617/ldselect/ldeucom/72/72.pdf>

- [5] Dhingra, S. (2016). Salvaging Brexit. The Right Way to Leave the EU. *Foreign Affairs*, vol. 95, iss. 6, pp. 90-100.
- [6] *European Union (Withdrawal) Bill 2017-19*. Parliament. [online]. [cit.2018-02-27]. Available at: <https://services.parliament.uk/bills/2017-19/europeanunionwithdrawal.html>
- [7] Fredriksen, H. H. (2009). *Europäische Vorlageverfahren und nationales Zivilprozessrecht*. Tübingen: Mohr Siebeck.
- [8] Gumbrell-McCormick, R., Hyman, R. (2017). What about the workers? The implications of Brexit for British and European labour. *Competition & Change*, vol. 21, iss. 3, pp. 169-184.
- [9] Horsley, T. (2017). Brexit and UK Courts: Awaiting Fresh Instruction. In Dougan, M. (ed.) *The UK after Brexit*. Cambridge: Intersentia, pp. 73-94.
- [10] Huxley-Binns, R., Martin, J. (2014). *Unlocking the English Legal System*. (4th ed.) Routledge.
- [11] Judgment of the Court of Justice of 24 June 1969, Milch-, Fett- und Eierkontor GmbH v Hauptzollamt Saarbrücken. Case 29/68. [online]. [cit.2018-02-27]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519741970511&uri=CELEX:61968CJ0029>
- [12] Judgment of the EFTA Court of 12 December 2003, *EFTA Surveillance Authority v Republic of Ireland*, case E-1/03. [online]. [cit.2018-02-27]. Available at: [http://www.eftacourt.int/uploads/tx\\_nvcases/1\\_03\\_Judgment\\_EN.pdf](http://www.eftacourt.int/uploads/tx_nvcases/1_03_Judgment_EN.pdf)
- [13] Judgment of the UK Supreme Court R (on the application of Miller and another) v Secretary of State for Exiting the European Union [2017] UKSC 5. [online]. [cit. 2018-03-01]. Available at: <https://www.supremecourt.uk/cases/docs/uksc-2016-0196-judgment.pdf>
- [14] Kiralfy, A. K. R. (1990). *The English Legal system*. (8th ed.) London: Sweet & Maxwell.
- [15] Koopmans, T. (1982). Stare decisis in European Law. In O'Keefe, D., Schermers, H.G. (eds.) *Essays in European law and integration*. Deventer: Kluwer law and taxation, pp. 11-27.
- [16] *Practice Statement* [1966] 3 All ER 77. House of Lords.
- [17] Sehnálek, D. (2018). *Specifika výkladu práva Evropské unie a jeho vnitrostátní důsledky*. [online]. [cit.2018-02-27]. Available at: [http://www.muni.cz/research/acad\\_qualif/936940](http://www.muni.cz/research/acad_qualif/936940)
- [18] Svoboda, P. (2016). K právním aspektům brexitu. *Právní rozhledy*, 2016, iss. 22, p. 783.
- [19] Ševčíková, M. (2016). Analysis of the Main Causes of Brexit and Its Potential Consequences. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 961-969.
- [20] Van Reenen, J. (2016). Brexit's Long-Run Effects on the U.K. Economy. *Brookings Papers on Economic Activity*, iss. Fall 2016, pp. 367-383.

## How China's Financial Sector Contributed to the European Union Not Granting Market Economy Status to China

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### **Abstract**

*In 2016, 15 years after China's entrance into the World Trade Organization (WTO), a large discussion about granting market economy status to China for the purposes of trade defence investigations took place in the European Union (EU). However, instead of granting it automatically, i.e. in compliance with China's Accession Protocol, the EU explored the market conditions in China based on five technical criteria. One of these criteria was focused on the Chinese financial sector. The object of this paper is to evaluate the progress that China had recorded in the area of access to credit by the private sector, interest rates, banking reform, non-performing loans and the role of policy banks in the period 2001–2016. The qualitative research of this paper is based on using logical methods, such as the analysis of the official documents and data, their comparison in the monitored period and the deduction of the main conclusions. Although China had recorded significant progress in the liberalisation of its financial sector in the previous period, some weak points occur there all the time. This is also the reason why the EU did not grant market economy status to China.*

**Keywords:** China, financial sector, market economy status, policy banks, WTO

**JEL Classification:** E50, F13, K19

### **1. Introduction**

China's current leading position in the world economy is connected especially with its significant position in world trade. China has been the leading merchandise exporter since 2009. China's expansion to the foreign markets was followed by the increase of economic openness of other countries, especially due to the growth of their imports. China's main export destinations are the USA, the European Union (EU) and especially Asian countries, such as Hong Kong, Japan, South Korea, Vietnam, etc. While the EU is China's second largest export destination, China is the major source of the EU imports (Staničková, 2015). As China's export structure is similar to the EU (Fojtíková, 2012), and also with respect to the EU–China bilateral trade, which reaches on average over 1 billion euros a day, China has been a frequent target of anti-dumping (AD) investigations. In the period 1995–2016, from the whole number of 1.217 AD initiations filed by all WTO Members against China, the EU filed 129 AD initiations (WTO, 2018).

When China entered into the World Trade Organization (WTO) in December 2001, it was considered as a non-market economy by the other WTO Members. This term was the reason for the calculation of the 'normal value' and the determination of the 'dumping margin' in order to set anti-dumping duty. In the WTO, anti-dumping cases are governed by the Anti-Dumping Agreement (the Agreement on the Implementation of Article I of the GATT 1994).

However, the WTO Anti-Dumping Agreement sets only minimum requirements for using trade defence measures, such as AD duty and the WTO Members use these instruments in compliance with their domestic legislation, which may go beyond the WTO provisions. The WTO agreements do not define the term ‘market economy status’ (MES) either. In the WTO, China’s Protocol of Accession only enabled the importing WTO Members to provisionally apply ADD methodology that was not based on a strict comparison with the domestic prices of costs in China “*if the producers under investigation cannot clearly show that market economy conditions prevail in the industry producing the like product with regard to the manufacture, production and sale of that product*” (WTO, 2001). Based on the fact that besides the Protocol of Accession, which uses the term ‘market economy conditions’ in paragraph 15(a) of the Protocol of Accession, there is no distinction within the WTO system between market and non-market economies, nor any general WTO concept of a non-market economy; MES is, thus, granted solely under the national legislation of the WTO Member States. Although paragraph 15(d) of China’s Accession Protocol set the date until which it was possible to use a substitute methodology, i.e. a maximum of 15 years after China’s entrance into the WTO, i.e. by December 2016, not all WTO Members automatically grant MES to China by this term.

In the EU, although China had already requested MES for the purpose of trade defence investigations in 2003, granting MES to China was connected with the evaluation of the distortions of the Chinese economy that were caused by state interference. This was based on the fact that China is a socialist-market economy, in which the Chinese Communist Party and the central government play a crucial role. Thus, the European Commission explored if the prices and costs in China can reliably be used for the purpose of trade defence investigations. The evaluation of market conditions in China was based on five technical criteria that were set by the European Commission. One of these criteria was focused on the existence of a genuine financial sector, which operates independently of the state. In 2004, the MES Working Group was established in order to exchange information between the Chinese authorities and the European Commission. However, the MES Working Group last met in 2008 and the report of the European Commission showed that distortions prevailed in four out of five criteria, including the financial sector (European Commission, 2008). Except for technical criteria, the other important aspects of the EU-China cooperation included in the EU-China Strategic Partnership (Cihelková et al., 2017), were not considered.

The object of this paper is to depict China’s financial system, the reforms and laws that have contributed to its development since 2001, and to explore the forms of state influence that have distorted the market environment in China until now. The methodology of this paper is based on the analysis of the official documents issued by the EU or the WTO and the laws that were enacted by the Chinese authorities in the area of the financial sector. The structure of the paper is as follows: Firstly, some important specifics of the Chinese financial system are introduced and, secondly, the progress that has been achieved by China in the financial sector, especially the banking sector, is explored. Thirdly, the formulation of the areas in which market distortions remain is provided. In conclusion, some important facts are summarised.

## **2. China’s Financial Sector and its Main Specifics**

China’s financial system has contributed to the expansion of China, which has grown to be the largest economy in the world. While the functions and instruments of the financial system are similar to around the world, the level of state influence on the financial system is different in the individual countries and usually goes hand in hand with the government priorities of the economic development of a country. Thus, the financial system can be organised in multiple

ways that differ in terms of the role of the government, the relative importance of the banks and other financial intermediaries compared to stock and bond markets, the degree of financial leverage in the economy, and other differences. As Elliot and Yan (2013) state, China's national, regional, and local governments play a much bigger role in directing the activities of banks and other financial intermediaries than in America or Europe. This is also introduced in China's Constitution Law that stipulates that the state organs of the People's Republic of China apply the principle of democratic centralism (NPC, 2004), in which the central authorities play the most important role.

In China, the influence of the government on the financial sector is challenged through a complex set of actors, namely: (1) the National People's Congress (NPC), (2) the State Council and its commission, such as the Financial Stability and Development Commission and the State Council in the financial sector, (3) the People's Bank of China (PBC), (4) the Central Huijin Investment, (5) the China Banking Regulatory Commission (CBRC), (6) the China Securities Regulatory Commission (CSRC) and the China Insurance Regulatory Commission (CIRC), (7) the State Administration of Foreign Exchange (SAFE) and the National Council for Social Security Fund (European Commission, 2017). The range of their activities is wide, from the promulgation of financial sector laws and directives through regulatory and supervisory functions in the bank sector and in the field of securities and insurance up to the management of the foreign exchange market. In addition, some of them are also the important investors and stakeholders in some of the largest commercial banks and state-owned financial enterprises.

China's financial system is dominated by the banking sector. Bond and equity financing only account for about one fifth of the total credit to non-financial institutions. Unlike the non-financial sector, the financial sector is predominated by state-owned financial institutions (Song and Xiong, 2017). The importance of the banking sector lies in the allocation of financial resources. In 2016, RMB-denominated bank loans represented 67.4 % of the total 'social financing' (i.e. an indicator to measure the total funding of the non-financial enterprises and households by the financial system) in China compared to only 11.5 % for corporate bonds and 3.7 % for domestic equity financing. The remaining 17.4 % are trust loans, banker's acceptances, designated loans, foreign currency loans, etc. (PBC, 2017).

Regarding the structure of the banking sector in China, three state-owned and controlled banks play an important role, such as large commercial banks, joint-stock commercial banks, and the state policy banks (the China Development Bank, Export-import Bank of China and Agricultural Development Bank of China). Besides these, other banking institutions, such as city-commercial banks, rural commercial banks and foreign banks, etc. operate in China. In 2016, the total share of banking institutions in China's asset accounted for 68.4 %, from which the share of commercial banks reached 53.5 %, while the foreign banks' share was only 0.9 % (IMF, 2017). Although foreign banks have taken up only a small portion of the Chinese banking sector until now, the entrance of China into the WTO had a positive influence on FDI inflows, including the financial market, regardless of the fact that many state regulators and structural obstacles to foreign banks still exist in China (Fojtíková and Kovářová, 2013).

Besides banking institutions, China's financial system includes non-bank financial institutions, such as insurance companies, securities companies, pension funds and public funds and asset management businesses that are represented by trust companies, futures companies, private equity, etc. Although bank institutions have shared in China's financial system (from the view of assets) the most all the time, their share is declining in comparison with the asset management business. While in 2010 the share of bank institutions in the system asset was 84.6 %, it declined to 68.4 % in 2016. In contrast, the share of the asset management business

increased from 2.7 % to 24.9 % during the same period. The share on non-bank financial institutions remained at a similar level, i.e. around 10 % (IMF, 2017).

### **3. China's Financial Reforms on the Way to Granting MES**

The European Commission set criterion 5 for granting MES to China as follows: “*Existence of a genuine financial sector which operates independently from the state and which in law and practice is subject to sufficient guarantee provisions and adequate supervision*” (European Commission, 2008). The Commission focused especially on the evaluation of five areas, namely: (1) access to credit by the private sector, (2) interest rates, (3) the banking reform, improving the lending practice, respecting prudential standards, (4) non-performing loans and credit risk assessment and (5) the role of policy banks. Firstly, some weaknesses of China's financial system will be presented and, secondly, the way in which the Chinese authorities reform and build an independent financial system of the state will be introduced. However, when we evaluate the progress that China has achieved in its financial sector during the last 16 years, we should also take into account that the world financial crisis in 2008-2009 showed many problems also in other countries around the world (Dvoroková, 2014).

#### **3.1 Access to Credit by the Private Sector**

In general, limited access to credit can cause financial vulnerability for enterprises and economic loss for a country. Although the Chinese authorities argued that neither the government nor the banks discriminate against any enterprises with regard to loans, whether they are state-owned, joint-stock or private enterprises, the access to credit by the private sector, i.e. small and medium enterprises, is more difficult than for state-owned enterprises (SOEs) to obtain loans. As has been said, most banks in China are state-owned banks and traditionally favour SOEs over private firms. According to WTO (2016), 70 % of loans made by state-owned commercial banks were directed to SOEs, although their share in GDP was below 30 %. Liu et al. (2018) show that as a result of the implementation of the economic stimulus package in China in the period 2000–2013, SOEs received more bank loans and invested more than non-SOEs. In addition, bank lending became less responsive to firm profitability, and firm investments became less responsive to investment opportunities for SOEs, non-SOEs from favoured industries and regions, and non-SOEs with political connections. The special mission of the financial system to support SOEs has had profound impact on both the efficiency and risks of the financial system. In particular, it made the financial system heavily exposed to the problem of SOEs (Song and Xiong, 2017).

According to the IMF (2017), one of the current problems of China's financial system is the rapid build-up in risky credit that was partly due to the strong political pressures banks face to keep non-viable companies open, rather than letting them fall. Another issue is a rush of moral hazard and excessive risk-taking because of the mindset that the government will bail out troubled SOEs and local government financing vehicles IMF (2017). However, according to PBC (2018), at the end of 2017, loans to micro and small enterprises grew rapidly, i.e. 3.8 and 5.8 percentage points higher than that of loans to large enterprises and medium-sized enterprises respectively.

The different conditions for getting loans between SOEs and the private sector have also had impact on the international environment. The European Commission (2008) states that the exchange of credit guarantees by companies to ensure access to loans appears to be frequent practice among Chinese operators as demonstrated by some recent trade defence instrument investigations. Elliot and Yan (2013) show another issue, i.e. that the Chinese authorities grant loans to industries with overcapacity, such as shipbuilding and solar energy, and to small and

medium-size enterprises that are squeezed by the weaker export environment. This is also documented by the number of China's AD disputes in the WTO. However, in 2014, the Chinese authorities introduced several measures to discourage production in areas where there is overcapacity. Based on the Circular of the State Council on Publishing the Catalogue of Investment Projects, which is subject to Government Approval, projects in industries with excess capacity, such as iron and steel, electrolytic aluminium, cement, plate glasses and vessels industries, are now subject to filing with local governments. The Circular further specifies that the above projects are strictly subject to the Guiding Opinions of the State Council on Resolving Overcapacity, under which local authorities and central departments are not allowed to approve any new capacity expanding projects in those areas (WTO, 2016). This can induce many social problems in those Chinese provinces that are highly dependent on these industries.

On the other hand, it is obvious that the Chinese authorities use the monetary policy instruments, and in their framework also the credit policy, for achieving the national objects announced in the 13<sup>th</sup> Five-Year Plan. For example, in order to improve the efficiency of agricultural production, the PBC has actively promoted financial services, such as supply chain financing and movable assets financing, to support the scale of business in agriculture and to combine the primary, secondary, and tertiary industries in the rural areas. Financial services have been provided to support grain purchases and to accelerate the pace of overseas development of agriculture (PBC, 2017).

On the whole, according to the Chinese authorities the credit policy plays a greater role in structural adjustments to advance the economic restructuring as well as the industrial transformation and upgrading (PBC, 2017). This is also legally anchored in Article 34 of the Law on Commercial Banks that states: "*Commercial banks shall conduct their business of lending in accordance with the needs of the national economic and social development and under the guidance of the industrial policies of the State.*" (NPC, 1995).

### **3.2 Interest Rates**

Setting the interest rates in China is given by Article 38 of the Law on Commercial Banks that states "*Commercial banks shall determine loan interest rate in accordance with the upper and lower limits for loan interest rates prescribed by the People's Bank of China*" (NPC, 1995). Since 2003, the Chinese monetary policy has been driven largely by the need to reduce excess liquidity as well as credit growth and investment. However, instead of relying on the market-based instruments of the monetary policy, the Chinese authorities have attempted to limit credit growth through the 'window guidance', thereby largely avoiding significant increase in administered interest rates, which could hamper indebted companies' ability to repay bank loans.

The guidance has enabled the administrative controls of some sectors over their investment, thereby reducing their demand for credit. Thus, the administrative guidance tends to distort the capital market, preventing it from allocating credit to the most profitable investments. In addition, the administrative controls were not effective and the banking system has continued to accumulate excess reserves. The International Monetary Fund (IMF) also stated that interest rates should be the primary instrument to govern credit expansion rather than administrative limits on bank lending and that emphasis should be put on enhancing the efficiency of capital allocation (IMF, 2011). In 2005, the PBC decided to raise the central bank benchmark interest rates for deposits and lending (for the first time since July 1995), allowing financial institutions to lower the renminbi (RMB) deposit rates and broadening the range of lending rates. The PBC also scrapped a rule that forbade commercial banks from charging more than 1.7 times that



rate, thereby allowing them more freedom to take on riskier loans. The rise in interest rates constituted an important step in moving away from the administrative control of the monetary policy to indirect control involving price mechanisms, such as the interest rate, which could pave the way for a more efficient transmission of the monetary policy to the real economy through the capital market (WTO, 2006).

Besides the ‘window guidance’ and increasing the deposit and lending rates, the PBC issued penalty bonds (which bear interest rates lower than the market rates) to banks that had credit growth in excess of that specified in the ‘window guidance’, and administrative measures that regulated investment in the capital market, real estate sector and new investment projects (WTO, 2008).

Besides China’s administrative measures, in 2008 the European Commission pointed out another problem of the Chinese monetary policy, i.e. that the PBC and state bank interest rates were essentially equal to the prevailing PBC interest rates unlike in most other banking systems, where banks compete for customers based on creditworthiness and interest rates. Thus, it appears that normally less creditworthy SOEs do not pay higher interest rates than more creditworthy borrowers. This means that lending rates banks do not properly reflect the true costs of borrowing (European Commission, 2008).

However, since 2013 the PBC has continued its interest rate liberalisation and enabled financial institutions freedom to determine their lending rates. In March 2014, the PBC removed the upper interest rate limit for small-amount foreign currency deposits within the China (Shanghai) Free Trade Pilot Zone. In May 2015, the PBC removed the upper interest rate limit for small-amount foreign currency deposits nationwide, and cancelled the upper interest rate limit in October. Other important measures included the establishment of Short-Term Liquidity Operations (SLO) and a Standing Lending Facility (SLF), the extension of a part of the matured three-year central bank bills, and an increase in the quota of central bank discount funds to provide liquidity to financial institutions (WTO, 2016). On the whole, since 2011, China has made key progress in the liberalisation of interest rates and the implementation of the market-based interest rate reform (IMF, 2017). The key steps of the PBC included, among other things, the deregulation of the floor for the lending rates and the cap for deposit interest rates in July 2013 and October 2015.

### ***3.3 Banking Reform, Improving Lending Practice, Respecting Prudential Standards***

As Naughton (2006) states, the Chinese banking system entered into the 21<sup>st</sup> century woefully unsuited for the demand of a sophisticated market economy. This inadequacy was, according to Naughton, a result of the fact that the banking system that was created under the planned economy simply did not have the skills, incentives, or culture required to make an effective commercial banking system. Lin and Zhang (2009), who assessed the effect of bank ownership in China on performance over the period 1997–2004, found that the ‘Big Four’ state-owned commercial banks, i.e. the Industrial and Commercial Bank of China, the Bank of China (BOC), the China Construction Bank (CCB), and the Agricultural Bank of China are less profitable, less effective, and have worse asset quality than other types of banks except the ‘policy banks’.

In order to improve the efficiency of the four big banks, the government carried out their partial privatisation in 2002. At the end of 2004 the best two of the ‘Big Four’, i.e. the CCB and the BOC, were restructured into joint-stock corporations wholly owned by the Huijin Corporation, an arm of the central government. Besides this, the government measures were focused on the

corporate governance, non-performing loans, incentive structures, risk management structures, accounting standards, etc. During 2005 a comprehensive bank restructuring and reform program got under way, based on the reasonable degree of success achieved in writing off non-performing loans and recapitalising the banks. The timing of the program was also influenced by the beginning of the foreign-bank entry, mandated for December 11, 2006, by China's WTO Accession Protocol (Naughton, 2006). By 2008, China's banking reform had made significant progress that represented a significant improvement in credit to private enterprises, a gradual increase of loans to private enterprises by state-owned banks and the entire banking system becoming increasingly more diversified.

However, the European Commission (2008) pointed out some of the weak points in China's banking sector even after the reform process, such as the lack of independence supervisory bodies, the persisting constraints in lending and deposit-taking and the fact that international standards were sometimes implemented selectively. Many reasons explain these problems. According to Elliot and Yan (2013), the problem is especially the ownership structure, since few executives are offered stock incentives and their bonuses are not directly related to their economic contributions; another issue is the close linkages between SOEs and state-owned banks. Investors operating in China also complained about delays in obtaining licensing, restrictions on the provisions of services and lending restrictions in compulsory reserve ratios and high capital requirements for branches (European Commission 2008).

As a part of the announced market-oriented reforms over the period 2014–2020, the Chinese authorities issued the Decision on Certain Major Issues Concerning the Comprehensive Deepening of Reform, in which they call for a number of reforms also in the financial system including promoting qualified private capital to set up small and medium-sized banks. The Decision makes reference to liberalising the exchange rate, the capital account, and deposit interest rates, and includes a reform proposal with respect to SOEs, which are to increase the proportion of their operational income to be allocated to public finance to 30% by 2020. (WTO, 2016).

At the end of 2016, the 'Big Four' banks, with larger and more stable deposit bases, benefit from lower funding costs. They have dominated lending to large SOEs all the time, but recently have also diversified towards households. The 12 joint-stock banks lend more to small and medium-sized enterprises, and have moved aggressively into nonstandard credit assets, such as trust loans, entrusted loans, bankers' acceptances, and other relatively illiquid assets. City-commercial banks are more focused on regional SOEs and projects. Profitability has declined with the slowing economy, but remains positive (IMF, 2017). Since 2011, the main achievements of China's financial sector have included namely the upgrade of monetary and macroprudential policy frameworks, the liberalisation of interest rates and the implementation of a market-based interest rate reform, the enhancement of interagency cooperation in addressing macroprudential risks, and the strengthening of systemic risk monitoring by the PBC and regulatory agencies. The Chinese authorities have also implemented the Basel III regulatory framework. However, the financial system has been characterised by a high degree of government ownership all the time, which significantly complicates the valuation of assets and risk pricing IMF (2017).

### ***3.4 Non-performing Loans and Credit Risk Assessment***

Due to the large volume of policy loans and weak internal controls, since the late 1990s non-performing loans (NPLs) and technical insolvency have received the most attention from reform efforts. Elliot and Yan (2013) state that foreign reserves held by the PBC and bonds issued by the Ministry of Finance were the two main sources of funds used to rebuild the

commercial banks' balance sheets. The function of a state-owned company called the Central Huijin Company, which is controlled by the State Council, was to inject equity into the state-owned financial institutions. These equity infusions reached approximately 156 billion USD by 2012 Elliot and Yan (2013). Another approach employed by the government to reduce the NPLs was the establishment of four asset management companies (AMCs). These AMCs purchased NPLs from the banks, in exchange for bonds issued to the banks by the AMCs. The AMCs have resold most of the acquired NPLs, while restructuring loans to companies that are potentially viable (IMF, 2017). A third measure for reducing NPLs was the introduction of strategic investors, generally foreign investment banks or investment companies. As a result of these measures, the share of NPLs in the total loans declined from 25 % in 2002 to 0.95 % in 2012, although it increased moderately to 1.46 % in 2016 (PBC, 2017). However, these figures reflect only NPLs in the balance sheets of banks and do not contain the NPLs which have been transferred to AMCs, i.e. companies owned by the state. The European Commission (2008) also pointed out the 'grey area' between the normal loans and the NPLs, which is represented by the 'special mention loans'.

Despite the progress which the Chinese authorities have achieved in systematic risk oversight and macroprudential policy, some systematic risks, such as regulatory gaps, a weak coordination mechanism and conflicting objectives, have existed all the time. According to (IMF, 2017), the largest banks appear better capitalised, but vulnerabilities at the lower tiers are higher, and there is an increasingly large pool of potentially risky corporate debt. Credit still flows to unprofitable enterprises and the potential losses at banks are obscured by financial engineering.

### **3.5 Role of Policy Banks**

The existence of the 'policy banks', i.e. the Agricultural Development Bank of China (ADBC), the China Development Bank (CDB), and the Export-Import Bank of China (EximBank), in China is dated since 1994. China's policy banks have had the primary role of implementing the development objectives set by the Chinese government. Thus, the policy banks provide loans to different borrowers. While the China Development Bank (CDB) is responsible for increasing funding for large infrastructure projects, the Agriculture Development Bank mainly provides funds to the government to purchase grain, cotton and edible oil. The Exim Bank of China provides credit to the buyer or seller in the export and import sector and also plays an important role in implementing China's 'going-out' strategy. The policy banks are all still majority owned by the Chinese government and have a significant NPLs burden.

In April 2015, the State Council approved plans to reform these policy banks (The State Council, 2015). The reform plan defined the organisation structures, party leadership, responsibilities, business scope, management, the sources of funding, governance, risk control and supervision, information disclosure and the human resources management of the policy banks. The CDB was clearly defined as a development financial institution and the ADBC and the EximBank as policy-oriented banks. Although the governance of the three policy banks has been clarified, according to the PBC (2017), the boards of directors of these banks are appointed by the relevant ministries under the State Council and shareholders, respectively. In addition, in November 2017, China's banking regulator released special rules for three policy banks featuring a capital restraint mechanism to strengthen risk control and a new body, i.e. a cabinet-level committee, to oversee the financial policies, was established (Xinhua, 2017). Thus, the influence of the Chinese authorities on the three policy banks was again strengthened. However, the main intention of the creation of this committee was to insure the financial stability of the country, instead of disturbing the market environment in the Chinese

financial sector. Financial stability has also the reason for preventing the capital outflows of foreign investors (Navrátil, 2016). In 2016, the assets of the three policy banks, including the China Development Bank, reached 22,994 billion RMB, which was 30.6 % of GDP and 6.8 % of the system assets (IMF, 2017). In the long-term perspective, while the share of these banks in the total assets remained similar to the share in 2007, the share of the policy banks in GDP had gradually increased from 16.1 % in 2007 to 30.6 % in 2016 (IMF, 2011). According to IMF (2017), the policy banks' mandates should be further reviewed.

#### 4. Conclusion

Although China made significant progress on the way to a real market economy after its entrance into the WTO, some weak points in its financial sector have existed all the time. The Chinese authorities have gradually improved its monetary and macroprudential policy and announced a number of reform measures, but the state influence (under the leadership of the Central Committee of the Communist Party of China and the State Council) on the Chinese financial sector remained. The existence of the 'Big Four' banks and the three policy banks confirm the fact that the Chinese financial sector has to primarily contribute to achieving China's economic development and social targets.

Despite the reforms that China carried out in its financial sector during the last period, the EU did not grant MES to China by December 2016, although it can have a negative impact on the EU-China Strategic Partnership relations. The main reasons were the continuing restrictions on fixing interest rates by the commercial banks, the preference of the SOEs over private enterprises and commercial banks, the existence of NPLs, etc. These problems are directly relevant to trade defence investigations because the credit provided to companies at non-commercial rates must be regarded as an unfair distortion of the real prices. In addition, to obtain MES for trade defence investigations all five criteria must be met.

Besides the influence on EU's trade, China as a global power has an important influence on the global asset prices, and also the global interconnectedness of Chinese banks is rising. A financial sector shock would reduce domestic demand, giving a contractionary impulse to the global economy through lower commodity prices, reduced import demand, and lower outward investment. Thus, the transition to a market-based financial sector is a necessary condition for ensuring the stability of not only the Chinese economy.

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#### References

- [1] Cihelková, E., Nguyen, P. H., Woźniaková, M. and Straková, R. (2017). The EU-China Comprehensive Strategic Partnership in Context of EU General Concept of the "Strategic Partnership". *Journal of Security and Sustainability Issues*, vol. 6, n. 4, pp. 729–744.
- [2] Dvoroková, K. (2014). Impact of Economic Crisis on the International Monetary System. In *Proceedings of the 2nd International Conference on European Integration 2014*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 110–118.

- [3] Elliot, D. J. and Yan, K. (2013). *The Chinese Financial System: An Introduction and Overview* [online]. [cit.2018-02-02]. Available at: <https://www.brookings.edu/wp-content/uploads/2016/06/chinese-financial-system-elliott-yan.pdf>.
- [4] European Commission (2008). *Commission Staff Working Document on Progress by the People's Republic of China Towards Graduation to Market Economy Status in Trade Defence Investigations* [online]. [cit.2018-02-10]. Available at [https://trade.ec.europa.eu/doclib/docs/2009/june/tradoc\\_143599.pdf](https://trade.ec.europa.eu/doclib/docs/2009/june/tradoc_143599.pdf).
- [5] European Commission (2017). *Commission Staff Working Document on Significant Distortions in the Economy of the People's Republic of China for the Purposes of Trade Defence Investigations*. SWD (2017) 483 final [online]. [cit.2018-02-06]. Available at [http://trade.ec.europa.eu/doclib/docs/2017/december/tradoc\\_156474.pdf](http://trade.ec.europa.eu/doclib/docs/2017/december/tradoc_156474.pdf).
- [6] Fojtíková, L. (2012). China's External Trade After its Entrance into the WTO with the Impact on the EU. In *Proceedings of the 1st International Conference on European Integration 2012*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 56–65.
- [7] Fojtíková, L. and Kovářová, J. (2013). Influence of China's Entry into the WTO on Cross-border Financing. In *Proceedings of the 14th International Conference on Finance and Banking*. Opava: Silesian University, pp. 74–79.
- [8] IMF (2011). *People's Republic of China: Financial system Stability Assessment*, Country Report No.11/321 [online]. [cit.2018-02-03]. Available at: <http://www.imf.org/en/Publications/CR/Issues/2016/12/31/People-s-Republic-of-China-Financial-System-Stability-Assessment-25350>.
- [9] IMF (2017). *People's Republic of China: Financial system Stability Assessment*, Country Report No. 17/358 [online]. [cit.2018-02-03]. Available at: <http://www.imf.org/en/Publications/CR/Issues/2017/12/07/people-republic-of-china-financial-system-stability-assessment-45445>.
- [10] Liu, Q., Pan, X. and Tian G. (2018). To what extent did the economic stimulus package influence bank lending and corporate investment decisions? Evidence from China. *Journal of Banking & Finance*, vol. 86, pp. 177–193.
- [11] Lin, X. and Zhang, Y. (2009). Bank ownership reform and bank performance in China. *Journal of Banking & Finance*, vol. 33, issue 1, 2009, p. 20–29.
- [12] Naughton, B. (2006). *The Chinese Economy: Transition and Growth*. London: The MIT Press.
- [13] Navrátil, B. (2016). Ever-Closer or Multi-Speed Union. In *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, 2016. 649-655 p.
- [14] NPC (1995). *Law of the People's Republic on Commercial Banks* [online]. [cit.2018-02-04]. Available at: [http://www.npc.gov.cn/englishnpc/Law/2007-12/12/content\\_1383716.htm](http://www.npc.gov.cn/englishnpc/Law/2007-12/12/content_1383716.htm).
- [15] NPC (2004). *Constitution* [online]. [cit.2018-02-02]. Available at: [http://www.npc.gov.cn/englishnpc/Constitution/2007-11/15/content\\_1372963.htm](http://www.npc.gov.cn/englishnpc/Constitution/2007-11/15/content_1372963.htm).
- [16] PBC (2017). *2016 Annual Report* [online]. [cit.2018-02-02]. Available at: <http://www.pbc.gov.cn/english/130739/index.html>.

- [17] PBC (2018). *Statistical Report on Uses of Loans by Financial Institutions, 2017* [online]. [cit.2018-02-04]. Available at: <http://www.pbc.gov.cn/english/130721/3467990/index.html>.
- [18] Staničková, M. (2015). Classifying The EU Competitiveness Factors using Multivariate Statistical Methods. In *Procedia Economics and Finance*, vol. 23, pp. 313–320.
- [19] Song, Z. H. and Xiong, W. (2017). Risks in China's Financial System. *Working Paper No 24230*. Cambridge: NBER Working Paper Series.
- [20] The State Council (2015). *China approves reforms to three policy banks* [online]. [cit.2018-02-07]. Available at: [http://english.gov.cn/policies/latest\\_releases/2015/04/12/content\\_281475087560462.htm](http://english.gov.cn/policies/latest_releases/2015/04/12/content_281475087560462.htm).
- [21] WTO (2001). *Protocol of Accession* [online]. [cit.2018-02-03]. Available at: [https://www.wto.org/english/thewto\\_e/acc\\_e/a1\\_chine\\_e.htm](https://www.wto.org/english/thewto_e/acc_e/a1_chine_e.htm). [Accessed: 8 January 2017].
- [22] WTO (2006). *Trade Policy Review. Report by Secretariat - China*. WT/TPR/S/161 [online]. [cit.2018-02-07]. Available at: [https://www.wto.org/english/tratop\\_e/tpr\\_e/tp442\\_e.htm](https://www.wto.org/english/tratop_e/tpr_e/tp442_e.htm). [Accessed: 10 January 2017].
- [23] WTO (2008). *Trade Policy Review. Report by Secretariat - China*. WT/TPR/S/199 [online]. [cit.2018-02-09]. Available at: [https://www.wto.org/english/tratop\\_e/tpr\\_e/tp299\\_e.htm](https://www.wto.org/english/tratop_e/tpr_e/tp299_e.htm). [Accessed: 9 August 2017].
- [24] WTO (2016). *Trade Policy Review. Report by the Secretariat: China*. WT/TPR/S/342 [online]. [cit.2018-02-03]. Available at: [https://www.wto.org/english/tratop\\_e/tpr\\_e/s342\\_e.pdf](https://www.wto.org/english/tratop_e/tpr_e/s342_e.pdf).
- [25] WTO (2018). *Statistics on Dumping* [online]. [cit.2018-01-31]. Available at: [https://www.wto.org/english/tratop\\_e/adp\\_e/AD\\_InitiationsRepMemVsExpCty.pdf](https://www.wto.org/english/tratop_e/adp_e/AD_InitiationsRepMemVsExpCty.pdf).
- [26] Xinhua (2017). *Silk Road Information Service. Policy Brief* [online]. [cit.2018-02-09]. Available at: <http://silkroad.news.cn/english/2017/1116/69775.shtml>.

# European Integration in the Context of the European Single Market

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## **Abstract**

*In the contribution, it does draw attention to one degree of integration in a specific European Single Market. The main aim is to assess the current situation within the European Single Market with a focus on labor. Within this topic, it does analyze the evolution of immigration and emigration in the European area, and from a theoretical point of view, it does focuses on a new industry 4.0 that causes jobs to narrow and some jobs will be extinguished. In the field of statistical analyzes, correlations, it does examine the link between the number of jobs and the working time. The current situation in the labor market is characterized by low unemployment. It is importance and necessary to evaluate the number and type of jobs and the possibilities of adapting human resources to new trends in the context of the type of work. Currently, effective arrangement of human resources in the labor market is necessary for the development of new types of jobs and destruction of some.*

**Keywords:** *European Single Market, integration, number of job vacancies, working time*

**JEL Classification:** *M10, M12, M19*

## **1. Introduction**

In the contribution, it does draw attention to European integration in the context of the European Single Market. It does more focused on the free movement of human resources, which play an important role in the global market for the competitiveness of the market. The main aim is to assess the current situation within the European Single Market with a focus on labor. In the first part of the contribution, does focus on European integration, namely the current views that have been influenced by the external impact of the global economic crisis. In the framework of the methodology, it does look through the secondary data and the correlation analysis for the relationship between job vacancies and working time in a flexible working environment. Then it does examine the relationship between working time in classical employment and in the flexible form of employment. It examines these relationships through the SAS statistical system. In the second part of the contribution, it does analyze the European Single Market. In the final part of the contribution it does draw conclusions and analyze the relationship between the number of vacancies and working time.

## **2. Characteristics of European Integration and Methodology**

In the contribution I draw attention to European integration in the context of the European Single Market. According to (Luhmann, 2017). "Many integration theories predict that

heightened integration in Europe will give rise to a European identity. In order to better understand whose identities are impacted or formed most by integration:

- cognitive mobilization,
- optimism,
- support of the EU.”

The impact of the external environment, in particular the global economic crisis, has also affected European integration.

In the meaning (Gill, 2017), Manuel Barroso analyses the European crisis “It argues that in the current situation, the relative unity of Europe's ruling classes contrasts with the relative fragmentation of subaltern forces, mainly along national-popular lines. This situation shapes (but does not necessarily determine) the 'limits of the possible' for political agency in Europe, and it helps explain the persistence of neoliberalism in the European Union in a situation of organic crisis, where the relations of force remain contested, open and politically unstable.”

On the other hand (Freire, Cabrit, Duarte, Lopes, 2017) “The article finds that, on the one hand, in terms of patterns of workers' EU political alignments, there are no systematic differences between countries affected to varying degrees by the Great Recession. On the other hand, workers still feel fundamentally detached from the EU, especially when it comes to the manual workers. However, high levels of generalised detachment from the EU are not clearly translated into preferences for Eurosceptic parties, since there are high levels of vote fragmentation.”

From a theoretical point of view, it is possible to distinguish several forms of integration, according to (Cihelková, 2004, p.37- 40). One of the most significant ones is sector integration, which interconnects the individual sectors or industries. National integration, within which a common body is created. On the contrary, in the case of inter-state integration the common body and its powers do not exceed the scope of the individual national institutions. In case of large integration it is the acceptance of common territory measures, which can include e.g. free trade zones, purpose contracts and others (NAFTA, CEFTA, ASEAN or APEC etc.).

Migration can be defined as “the type of spatial mobility, in which people move across national borders to settle in the country for a certain period of time” (Divinski, 2005, p. 25).

In a contribution through the SAS program I will examine correlation between the number of job vacancies and the number of hours worked with the secondary data from Eurostat. Subsequently, through correlation I will examine the relationship between work at home and vacancies, working hours at work.

Pearson Correlation Calculation:

$$r = \frac{\sum x_i y_i - \frac{\sum x_i \sum y_i}{n}}{\sqrt{(\sum x_i^2 - \frac{(\sum x_i)^2}{n}) (\sum y_i^2 - \frac{(\sum y_i)^2}{n})}} \quad (1)$$

The evaluation of Pearson correlation is as follows:

- 0 < |r| ≤ 0.3 - weak dependence,
- 0.3 < |r| ≤ 0.8 - mild to moderate dependence,
- 0.8 < |r| ≤ 1 - strong dependence.



### 3. Evaluate of European Single Market

According to (Schallbruch, 2017) “By passing a new regulation on network and information security, the Union aims to present a modern regulatory approach to a key issue of the digital economy. The EU directive, set into force in August 2016, is a major step to a stable regulatory environment that might be a raw model for regulators worldwide. However, from a technology perspective, the legislation will predominantly lead to compliance efforts of market operators, not to technological innovations.”

On the basis of (D’Antone, Canning, Franklin-Johnson, Spencer, 2017) “the analysis of market practices integrating, and at the same time, performing values and concerns, leads us to the conceptualization of a theoretical model which shows that one of the difficulties of realizing concerned market innovations resides in the distinction between market and society.” (Camisão, Guimarães, 2017) interpret “the economic and financial crisis opened a window of opportunity to place the Single Market back on top of the European agenda as part of a two-tiered crisis response, which also included reinforced financial supervision and economic co-ordination. Our findings suggest that the Commission's entrepreneurship was constrained by the limited salience of Single Market issues in the crisis context and by the lack of actual political commitment from the other relevant stakeholders. Thus, our research highlights the limits of the Commission's opportunistic behaviour in less advantageous circumstances.”

On the other hand (Krause, Rinne, Zimmermann, 2017) “the experts agree on the SELM’s importance, especially for larger economic welfare, but are not convinced that it has been achieved. To enhance labour mobility across Europe, the respondents identify key factors such as recognizing professional qualifications more efficiently, harmonizing social security systems, and knowing several languages. Moreover, at least 50 percent of the respondents consider positive attitudes – by policy makers and citizens alike – toward free mobility to be important to enhance labour mobility.”

(Kahanec, Guzi, 2017) “show that immigrants have responded to changing labour shortages across EU member states, occupations and sectors at least as much and in many cases more flexibly than natives. The results suggest that immigrants may play an important role in labour adjustment during times of asymmetric economic shocks, and support the case for well-designed immigration policy and free movement of workers within the EU. Some limitations include alternative interpretations of the wage premium as our measure of shortage, as well as possible endogeneity of this measure in the model.”

From historical point of view and within the phase of adulthood of the conception of human resources management work satisfaction has dropped. Work content enrichment program has been introduced as well as an attempt to go beyond the strict scope of traditional organisation of working hours and the introduction of flexible forms. Reorganisation of organised work rules and new forms of job organisation were addressed by management. In the 70s of the last century the institutions introduced telework (work outside the work place, which occurred as a result of means of communication development). At the beginning of the 80s of the last century, a job sharing model became a flexible form of work organisation for managers.

The name Industry 4.0 comes from Germany, where in 2011, certain concept initially originated from an analysis of the consequences of new technologies on the country's economy. The given innovations radically changed everything; the industrial factories changed in a new organisation and would be more efficient by 30 to 40 percent.

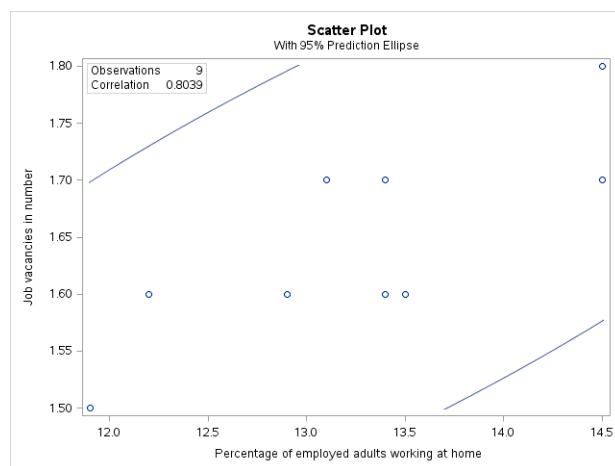
### 3.1 Job Vacancies in the Context of a Flexible Form of Work

In the meaning (GafarovEvgeny, LazarevAleksandr, ZinovyevAleksandr, 2017) “the paper studies a practical problem of resource assignment and optimal human resource allocation scheduling with the objective of minimizing employees' useless working time and retire some workers. We propose numerical results on real data (120 competencies, 250 workers, 1000 tasks) proved potential efficiency and practical value supposed model and algorithms solving the problem. The number of required staff can be reduced by 41,7% and the total salary can be reduced by 16,5%.”

According to (Collewet, Sauermann, 2017) “this paper studies the link between working hours and productivity using daily information on working hours and performance of a sample of call centre agents. We find that as the number of hours worked increases, the average handling time for a call increases, meaning that agents become less productive. This result suggests that fatigue can play an important role, even in jobs with mostly part-time workers.”

The following figure shows the correlation between the number of vacancies and the percentage of the number of working at home. Correlation analysis shows the state from 2009 to 2017.

**Figure 1: Correlation Analysis Job Vacancies and Employed Adults Working at Home**



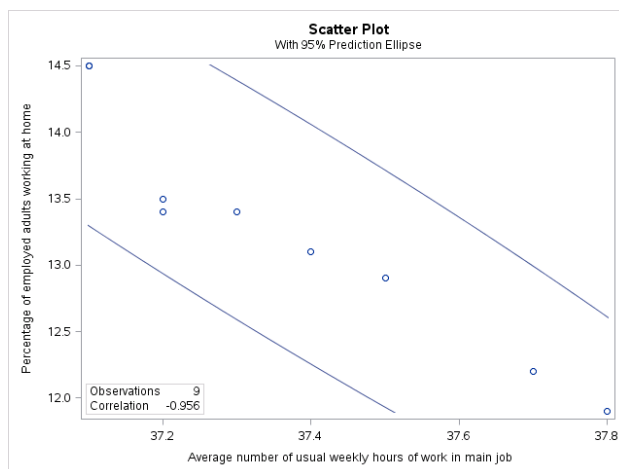
Source: own processing based on data from the Eurostat [online], 2018

The value of the correlation coefficient is 0.8039, which is the strong dependence of the given relationship.

### 3.2 Working Time in the Context of a Flexible Form of Work

Based on (Müller, Mander, Hellert, 2017) study “apparently, trust emerges in a different way in virtual working structures than in face-to-face teams. Control and responsibility move towards the members of the team, which in turn corresponds with a necessity for trust. When taking a closer look at the role of leaders and team members in virtual environments, it becomes clear that reciprocity cannot be taken for granted in virtual teams.”

Through correlation analysis, it does increase the number of working hours at the workplace with the number of hours in flexible employment, working at home.

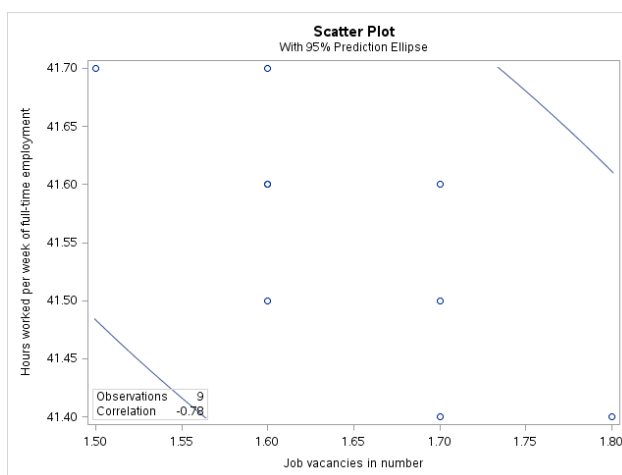
**Figure 2: Correlation Analysis Working Time and Employed Adults Working at Home**

Source: own processing based on data from the Eurostat [online], 2018

The value of the correlation coefficient is negative  $-0.956$ , which represents a strong dependence of the given relationship.  $N=9$ .

#### 4. Conclusion

Based on the examinations of these relationships, it does find that there is a strong dependence between the number of vacancies and the number of working hours. It does analyses the relationship in the following figure.

**Figure 3: Correlation Analysis Job Vacancies and Working Time**

Source: own processing based on data from the Eurostat [online], 2018

The value of the correlation coefficient is negative  $-0.78$ , which is a slight dependence of the relationship.  $N=9$ .

If an organization wants to be effective and competitive, it must have a good quality human resources according to (Dzieńdziora, Smolarek, 2016) “among the human resources management new challenges, which put stress on the development of the company employees, it is possible to mention the following elements: competences management, talents management, succession planning and empowerment.”

European integration in the sense of (Feber, Petrucijová, 2016) “under the influence of globalization and European integration, there is a revival of interest in economic ethics as precondition of successful integration of culturally varied economic subjects. In our opinion, even economic activities rooted in economic ethics are important but not sufficient preconditions of the European integration. Their crucial prerequisite should be human-focused approach (presented in the idea of good society) corresponding to forming of demos sharing humanism as all-European value.” On the other hand (Fránková, 2016) “support for research, development, and innovation therefore seems to be the best way to achieve cohesion of European countries and gradual European integration. Innovations are considered to be the main driver of economic development of states and regions. Innovation policy is evolving in all developed countries and it is clear that this policy is going to play a crucial role in the future efforts for European integration and joint development of European states.”

In the framework of non - member countries, the following procedure is being followed in assessing European integration (Gazzola, P., Sepashvili, E. and Lo Parco, A., 2016) “the civil society developed a tool to monitor the process of European integration for EaP countries: the European Integration Index for EaP Countries . The index measures countries’ track towards the EU integration. It contains on three main dimensions: deep and sustainable democracy, cross-sector picture of a country in a comparative manner and. independent analysis on country report.”

As a part of evaluation and recommendation I assume the following:

- the number of job vacancies relates to the number or hours worked;
- work from home affects the number of job vacancies and hours worked at the workplace;
- given context in the scope of work organisation has an impact on work productivity and better working relationships in the workplace;
- flexible working environment currently prevails in organisations;
- company culture is based on trust, results and responsibility for the work delivered;
- flexible form of employment helps people balance their work and personal lives;
- for given trends the controlled process is dropped and the emphasis is placed on a completed and timely delivered work.

## References

- [1] Camisão, I. and Guimarães, M.H., (2017). The Commission, the Single Market and the Crisis: The Limits of Purposeful Opportunism. *Journal of Common Market Studies*, 55(2), pp. 223-239.
- [2] Cihelková, E. (2004). *Evropská integrace – Evropská unie*. Praha: Vysoká škola ekonomická v Praze – Oeconomica.
- [3] Collewet, M. and Sauermann, J., (2017). Working hours and productivity. *Labour Economics*, 47, pp. 96-106.

- [4] D'Antone, S., Canning, L., Franklin-Johnson, E. and Spencer, R., (2017). Concerned innovation: The ebb and flow between market and society. *Industrial Marketing Management*, 64, pp. 66-78.
- [5] Divinský, B. (2005). *Zahraničnámigrácia v Slovenskejrepublike – Stav, trendy, spoločenskésúvislosti*. Bratislava: Friedrich Ebert Stiftung.
- [6] Dzieńdziora, J. and Smolarek, M. (2016). Contemporary Challenges of Human Resources Management in Small and Medium Enterprises in Conditions of European Integration on the Example of Region of Silesia in Poland. In *3rd International Conference on European Integration (ICEI)*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 182–189.
- [7] Feber, J. and Petrucijová, J. (2016). Economic Activity and Economic Ethics in the Context of Globalization. In *3rd International Conference on European Integration (ICEI)*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 210–220.
- [8] Fráková, Š. (2016). Instruments for Innovation Support and Their Classification: an Example of Instruments used in European Countries In *3rd International Conference on European Integration (ICEI)*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 239–246.
- [9] Freire, A., Cabrita, L., Duarte, M.C. and Lopes, H.F., (2017). Workers' EU political alignments during the Great Recession. *Transfer*, 23(4), pp. 387-408.
- [10] GafarovEvgeny, R., LazarevAleksandr, A. and ZinovyevAleksandr, V., (2017). Algorithms for workforce assignment problem, Proceedings of 2017 *10th International Conference Management of Large-Scale System Development, MLS D* 2017.
- [11] Gazzola, P., Sepashvili, E. and Lo Parco, A. (2016). EU Integration for a Successful Eastern Partnership: Trade and Sustainability. In *3rd International Conference on European Integration (ICEI)*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 247–254.
- [12] Gill, S. (2017). Transnational Class Formations, European Crisis and the Silent Revolution. *Critical sociology*, vol.43, iss.4-5, pg. 635-651.
- [13] Kahanec, M. and Guzi, M., 2017. How immigrants helped EU labor markets to adjust during the Great Recession. *International Journal of Manpower*, 38(7), pp. 996-1015.
- [14] Krause, A., Rinne, U. and Zimmermann, K.F., (2017). European labor market integration: what the experts think. *International Journal of Manpower*, 38(7), pp. 954-974.
- [15] Luhmann, S.(2017). A Multi-Level Approach to European Identity: Does Integration Foster Identity? *Journal of Common Market Studies*, 55(6), pp. 1360-1379.
- [16] Müller, F., Mander, R. and Hellert, U., (2017). Promoting virtual work structures through trust, time competency and process feedback. Gruppe.Interaktion.Organisation. *Zeitschrift für Angewandte Organisationspsychologie*, 48(4), pp. 279-287.
- [17] Pacáková, V. (2003). *Štatistika pre ekonómov*. Bratislava: Iuraedition.

- [18] Schallbruch, M., (2017). The european network and information security directive - A cornerstone of the digital single market. *Digital Marketplaces Unleashed*. pp. 287-295.
- [19] Eurostat (2018). Statistics [online]. [cit.2018-01-20]. Available at: [http://ec.europa.eu/eurostat/data/database?node\\_code=proj](http://ec.europa.eu/eurostat/data/database?node_code=proj)
- [20] Eurostat (2018). Statistics [online]. [cit.2018-01-20]. Available at: <http://ec.europa.eu/eurostat/web/lfs/data/main-tables>
- [21] Eurostat (2018). Statistics [online]. [cit.2018-01-20]. Available at: <http://ec.europa.eu/eurostat/web/labour-market/quality-of-employment/database>
- [22] Eurostat (2018). Statistics [online]. [cit.2018-01-20]. Available at: <http://ec.europa.eu/eurostat/web/labour-market/job-vacancies/main-tables>

## Real Estate Markets Assessment in Country Risk Context: EU Baltic Countries Case

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### **Abstract**

*Real estate is a important sector of national economies and the appropriate financial use of real estate is a driving force for economic sustainability and growth. The objective of this paper is to evaluate the relationship between real estate markets condition and country risk indicators in EU Baltic Sea region countries. This paper proposes the analysis of the relationship between real estate markets condition and country risk in EU Baltic Sea region countries based on statistical data from 2016. The results were optimized by implementing Multi-Objective Optimization by Ratio analysis and Full Multiplicative Form Method (MULTIMOORA). Findings provide evidence for real estate condition being dependent on country risk ratios.*

**Keywords:** country risk, European Union, MULTIMOORA method, real estate markets

**JEL Classification:** R31, F63, C10

### **1. Introduction**

Specificity of real estate markets is broadly discussed in literature (Gorzeń-Mitka et al., 2016; GPG [online], 2018; Lieser and Groh, 2014; Sitek, 2012; Kuraś, 2013). Most often, the complexity and risk of this market is stressed as well as the scale of its interconnections (Gorzeń-Mitka, 2016, 2017; Kuraś, 2013; Lieser and Groh, 2014) and the economic and social significance. Analyzing a given real estate market in the context of other economies, one should stress that such markets' vary in each country due to different economic, financial, social or legal conditions. Properties are also an important area of interest of foreign investors (Gorzeń-Mitka et al., 2016; Sipa, 2017; Kuběnka and Slavíček, 2016; Mesjasz-Lech and Skowron-Grabowska, 2016). Buying properties outside one's own country often generates additional requirement and areas of risk for the buyer, generally referred to as country risk variables.

The multiplicity of variables in these cases is an incentive to seek methods that could it optimize and reduce the level of related risk. One of the methods which allow for taking into consideration multiple decision criteria simultaneously is the MULTIMOORA method developed by Brauers and Zavadskas (2006, 2010).

In this article relationship between selected real estate market variables and country risk will be analysed. The main goal of this study is to determine the relationship between real estate market and country risk. In this article relationship between selected real estate market variables and country risk will be analysed. The data covers 8 EU Baltic Sea region countries, year 2016 (latest available data) and 22 structural indicators (10 concerns real estate market variables, 12 - country risk variables), 176 observations in total. The main tasks of the study

are the following: to identify country risk indicators which have positive and negative effect on real estate market conditions by MULTIMOORA method procedure. The article consists of the following parts: the first one – introduction, the second – some theoretical remarks on Country risk context in real estate markets assessment. The next part explain research problem and describe methodology. The last one presents the results of the analysis.

## **2. Country Risk Context in Real Estate Markets Assessment - Some Theoretical Remarks**

Assessment of real estate markets from country risk perspective is a topic, which is quite rarely approached by researchers. Risk assessment is crucial in developing an investment strategy on real estate market. Risk can be linked to internal or external factors. It has also two main sources: the country risk where the investment is located or within the project itself (Quer et al., 2007; Schroeder, 2008; Gorzeń-Mitka et al., 2017). Country risks are primarily linked to changes in the economic, political or social situation. According many researchers and market experts the main factor to look out for is rising inflation, because it is the barometer for a country's economic health. When it is strays from acceptable levels, currency, imports and exports, lending, purchasing power and consumer or tenant morale are all affected (GPG [online], 2018; Schroeder, 2008; Skibiński, 2017; Stankevičienė and Sviderskė, 2012; Stankevičienė et al., 2013; Lieser and Groh, 2014). Another important factor is currency volatility, aftermath of it include falling GDP, slowing production, shrinking exports and lower purchasing power. Other factors which also have a crucial impact on local and national real estate markets are population growth, mass movements of people or changes to legislation and taxation systems. After analysing of different scientific articles and different opinions of researchers (Gorzeń-Mitka, 2017; Gorzeń-Mitka et al., 2016), it is clear that assessment of real estate market from country risk perspective is complex and dynamic. Its complexity stems from the multitude of economic, social, financial, law variables, which create determinate both country risk and real estate market conditions (Gorzeń-Mitka et al., 2017; Kuběnka and Slaviček, 2016; Sitek, 2012). Its dynamism is caused by the quick pace of the economic processes and phenomena on both national and global level (Stankevičienė and Sviderskė, 2012; Stankevičienė et al., 2013; Gorzeń-Mitka, 2018). Most of the approaches of country risk assessment provided by researchers and institutions from various countries (e.g. rating agencies) (Stankevičienė and Sviderskė, 2012; Schroeder, 2008; Gorzeń-Mitka et al., 2016) is determined by four main components: domestic economic variables, macroeconomic policy evaluation, balance of payments and social indicators.

Further analysis will show how important it is to distinguish the dependence of real estate market indicators on country risk indicators, as by this approach, many decisions could be made, evaluating different types of opportunities. Due to its particular conditions, making investment decisions on the real estate market, especially on foreign markets requires that one takes into account multiple variables. According Lieser and Groh (2014) and Sitek (2012) when we analysing a attractiveness of a property as a subject of an investment, among many factors should be distinguished the following e.g.: the flow of income achieved during the time of owning the property, the appreciation of the value of the subject of the investment, tax advantages (tax breaks systems).

Thus, making decisions on this market, especially in foreign countries, implies the need to assess multiple variables, interactions among them as well as forecasts regarding their potential changes in the future. Scientific literature presents many different methods how to measure market condition and risk and there is a debate which one is more accurate. One of the methods



which allow for taking into account many variables in a decision-making process is the MULTIMOORA method.

### 3. Problem Formulation and Methodology

The main goal of this study is to determine the relationship between real estate market and country risk. In this article relationship between selected real estate market variables and country risk will be analysed. There is an assumption, proposed by the author, that all variables are interrelated with each other dependence.

#### 3.1 Research Method

The current study tackles a assessment of relationship between real estate markets condition and country risk in EU Baltic Sea region countries by applying a multiple criteria decision analysis method i.e., MULTIMOORA.

##### 3.1.1 MULTIMOORA Method

MULTIMOORA method is an extension by Multi-Objective Optimization by Ratio Analysis (MOORA) method. This method consists of three parts, namely Ratio System, Reference Point and Full Multiplicative Form. It was introduced and developed by Brauers and Zavadskas (2006, 2010). These methods have been applied in different studies in many different areas (Brauers et al., 2008; Brauers and Ginevičius, 2010; Gorzeń-Mitka et al., 2016; Stankevičienė and Sviderskė, 2012). In this study it was use MULTIMOORA method procedure describe by Brauers and Zavadskas (2006, 2010).

##### 3.1.2 Real Estate Market and Country Risk Indicators

After consolidating different types of variables', different groups of real estate market assessment and country risk indicators were created (Table 1 and Table 2). For assessment of real estate market, three main groups of variables were distinguished - property prices, property rent and property rights. Each group includes a set of indicators, which describe real estate market conditions (Lieser and Groh, 2014).

**Table 1: Grouping of Indicators for Real Estate Market (REM) Assessment**

Property price variables	Symbol	Property rent variables	Symbol	Property right variables	Symbol
Square meter prices	REM 1	Rental Yields	REM 5	Landlord & Tenant Law	REM 8
Price/GDP per Capita	REM 2	Price/Rent Ratio	REM 6	Economic Freedom	REM 9
Round trip transaction costs	REM 3	Rental Income Tax	REM 7	Property Rights Index	REM 10
Price Change 5 yrs	REM 4				

Source: own study based on <http://www.globalpropertyguide.com>

According Schroeder (2008) and Sipa (2017) for country risk, four main groups of variables were distinguished - domestic economic variables, macroeconomic policy evaluation, balance of payments and social indicators. Each group includes a set of three indicators, which mostly describe country risk.

**Table 2: Grouping of Indicators FOR Country Risk (CR) Evaluation**

Domestic economic variables	Symbol	Macro-economic policy evaluation	Symbol	Balance of payments	Symbol	Social indicators	Symbol
Gross domestic investment (% of GDP)	CR 1	Inflation (%)	CR 4	The current account balance (% of GDP - 3 year average)	CR 7	Unemployment Rate (% of Labour Force)	CR 10
GDP (PPP-billion USD)	CR 2	Real effective exchange rate	CR 5	Balance of trade (% of GDP)	CR 8	Natural population change (annual growth %)	CR 11
Private consumption (% of GDP)	CR 3	Current taxes on income, wealth, etc. (% of GDP)	CR 6	Exports of goods and services (% of GDP)	CR 9	Employment (% of total population)	CR 9

Source: own study based on Stankevičienė, Sviderskė and Miečinskienė (2013).

### 3.2 Data

The data covers 8 EU Baltic Sea region countries, year 2016 (latest available data) and 22 structural indicators, 176 observations in total.

**Table 3: Real Estate Market Indicators for EU Baltic Sea Region Countries**

Country/ Indicator	REM 1	REM 2	REM 3	REM 4	REM 5
Denmark	4279	4.84	20.66	9.87	2.23
Estonia	2156	6.64	15.09	15.03	4.08
Finland	6609	4.11	24.33	18.85	6.99
Germany	4326	3.99	25.06	12.72	12.71
Latvia	2297	3.8	26.32	20.25	6.11
Lithuania	2370	4.69	21.32	19.73	3.44
Poland	2793	5.5	18.18	28.02	6.73
Sweden	6991	n/a	n/a	16.96	8.25
Country/ Indicator	REM 6	REM 7	REM 8	REM 9	REM 10
Denmark	1.71	19.01	-2	75.05	86.72
Estonia	20	56.71	-1	79.06	82.61
Finland	22.5	1.43	0	73.00	90.56
Germany	2.71	34.69	-1	73.8	82.91
Latvia	17.25	21.44	1	74.39	72.56
Lithuania	1.96	22.94	-1	75.78	72.98
Poland	13.5	5.8	0	68.26	60.8
Sweden	0	45.27	-2	74.91	88.56

Source: own study

All data for analysis was received from European Statistics Database (Eurostat [online], 2018), The Global Economy ([online], 2018) and Global Property Guide ([online], 2018) portals, the World Bank ([online], 2018) and International Monetary Fund ([online], 2018) for EU Baltic Sea region countries. The indicators used for calculations are presented in Table 3 and Table 4.

**Table 4: Country Risk Indicators for EU Baltic Sea Region Countries**

Country/ Indicator	CR 1	CR 2	CR 3	CR 4	CR 5	CR 6
Denmark	19.552	46704.02	47.51	0.3	1.1	30.0
Estonia	24.455	29543.27	51.55	0.1	1.6	7,7
Finland	19.985	41690.12	55.04	0.4	1.3	16.5
Germany	19.162	47535.63	53.62	0.5	1.5	12.6
Latvia	22.206	25883.27	62.01	0.1	1.3	8.4
Lithuania	18.864	29716.65	65.08	0.9	2.0	5.7
Poland	20.598	27670.46	58.64	- 0.6	-3.5	7.1
Sweden	25.09	49424.52	44.40	1.0	0.7	18.7
Country/ Indicator	CR 7	CR 8	CR 9	CR 10	CR 11	CR 12
Denmark	8.4	6.88	53.58	6.2	0.22	80
Estonia	1.4	3.96	78.98	6.8	-0.54	77.5
Finland	-1.2	-1.21	35.23	8.8	0.38	75.9
Germany	8.1	7.62	46.12	4.1	-0.16	77.9
Latvia	-0.3	0.55	60.04	9.6	-1.07	76.3
Lithuania	-0.3	0.85	74.51	7.4	-1.06	75.5
Poland	-0.1	3.89	52.26	6.2	-0.11	68.8
Sweden	4.6	4.63	44.27	7.0	0.81	82.1

Source: own study

#### 4. Problem Solution

The initial data was normalized according to MULTIMOORA method procedure describe by (Brauers and Zavadskas, 2006, 2010). The results are presented in Table 5, 6 for real estate market indicators and in Table 7 for country risk indicators.

**Table 5: Real Estate Market Indicators for EU Baltic Sea Region Countries - Decision Matrix Normalized by MULTIMOORA**

Country/ Indicator	REM 1	REM 2	REM 3	REM 4	REM 5
Denmark	0.0266	0.0193	0.0291	0.0000	0.0000
Estonia	0.0000	0.0526	0.0000	0.0130	0.0083
Finland	0.0557	0.0057	0.0482	0.0226	0.0214
Germany	0.0271	0.0035	0.0520	0.0072	0.0472
Latvia	0.0018	0.0000	0.0586	0.0261	0.0175
Lithuania	0.0027	0.0165	0.0325	0.0248	0.0054
Poland	0.0080	0.0315	0.0161	0.0457	0.0202
Sweden	0.0605	0.0000	0.0000	0.0179	0.0271

Source: own study

**Table 6: Real estate Market Indicators for EU Baltic Sea region Countries - Decision Matrix Normalized by MULTIMOORA**

Country/ Indicator	REM 6	REM 7	REM 8	REM 9	REM 10
Denmark	0.0047	0.0163	0.0000	0.0266	0.0447
Estonia	0.0555	0.0513	0.0390	0.0423	0.0376
Finland	0.0624	0.0000	0.0780	0.0185	0.0513
Germany	0.0075	0.0309	0.0390	0.0217	0.0381
Latvia	0.0478	0.0186	0.1170	0.0240	0.0203
Lithuania	0.0054	0.0200	0.0390	0.0294	0.0210
Poland	0.0374	0.0041	0.0780	0.0000	0.0000
Sweden	0.0000	0.0407	0.0000	0.0260	0.0478

Source: own study

**Table 7: Country Risk Indicators for EU Baltic Sea Region Countries - Decision Matrix Normalized by MULTIMOORA**

Country/ Indicator	CR 1	CR 2	CR 3	CR 4	CR 5	CR 6
Denmark	0.0102	0.0897	0.0122	0.0423	0.0638	0.0805
Estonia	0.0832	0.0158	0.0281	0.0329	0.0708	0.0066
Finland	0.0167	0.0681	0.0417	0.0470	0.0666	0.0358
Germany	0.0044	0.0933	0.0362	0.0517	0.0694	0.0229
Latvia	0.0498	0.0000	0.0691	0.0329	0.0666	0.0089
Lithuania	0.0000	0.0165	0.0811	0.0705	0.0763	0.0000
Poland	0.0258	0.0077	0.0559	0.0000	0.0000	0.0046
Sweden	0.0927	0.1014	0.0000	0.0752	0.0583	0.0431
Country/ Indicator	CR 7	CR 8	CR 9	CR 10	CR 11	CR 12
Denmark	0.0976	0.0771	0.0343	0.0279	0.0585	0.0590
Estonia	0.0264	0.0493	0.0818	0.0359	0.0240	0.0459
Finland	0.0000	0.0000	0.0000	0.0625	0.0658	0.0374
Germany	0.0946	0.0842	0.0204	0.0000	0.0413	0.0480
Latvia	0.0092	0.0168	0.0464	0.0732	0.0000	0.0395
Lithuania	0.0092	0.0196	0.0734	0.0439	0.0005	0.0353
Poland	0.0112	0.0486	0.0318	0.0279	0.0435	0.0000
Sweden	0.0590	0.0557	0.0169	0.0386	0.0853	0.0701

Source: own study

After data is normalized, the correlation analysis could be presented in order to understand the relationship between each variable for each real estate market characteristic and country risk group (Table 8).

As we can see from Table 8, there are both - positive and negative correlations between variables. The relationship between indicators is strong, the strongest correlation is between i.e. square meter prices (property price variables group) and social indicators i.e. natural population change (measuring as percent of annual growth) (country risk ratio).

**Table 8: Correlation Matrix Between Real Estate Market and Country Risk Indicators for EU Baltic Sea Region Countries**

	CR 1	CR 2	CR 3	CR 4	CR 5	CR 6
REM 1	0.1271	0.8200*	-0.6349	0.4738	0.0925	0.6066
REM 2	0.2020	-0.4588	-0.0165	-0.5017	-0.2476	-0.2674
REM 3	-0.6445	-0.0289	0.5112	-0.0045	0.2858	-0.0299
REM 4	0.0192	-0.6520	0.5839	-0.4855	-0.7089*	-0.6471
REM 5	-0.0107	0.3967	-0.1239	0.0946	-0.0913	-0.1442
REM 6	0.1970	-0.5394	0.2756	-0.5659	-0.1168	-0.3731
REM 7	0.6697	0.1365	-0.4392	0.3599	0.4105	-0.0921
REM 8	-0.1213	-0.6837	0.7134*	-0.5407	-0.2276	-0.5889
REM 9	0.3807	0.0592	-0.2309	0.5185	0.8245*	0.0641
REM 10	0.1893	0.7695*	-0.6963	0.6083	0.6492	0.6619
	CR 7	CR 8	CR 9	CR 10	CR 11	CR 12
REM 1	0.2739	0.0324	-0.8261*	-0.0088	0.8851**	0.4918
REM 2	-0.1648	0.1472	0.6457	-0.2124	-0.2179	-0.3377
REM 3	-0.0481	-0.2872	-0.3005	0.2314	-0.3484	-0.1310
REM 4	-0.7699*	-0.5270	0.0007	0.3453	-0.2188	-0.8223*
REM 5	0.2593	0.2650	-0.5726	-0.4036	0.2811	0.0299
REM 6	-0.6828	-0.6025	0.0480	0.5557	-0.2075	-0.4431
REM 7	0.3456	0.4324	0.4667	-0.3013	-0.0348	0.5838
REM 8	-0.7049*	-0.6437	-0.0141	0.5711	-0.5176	-0.6467
REM 9	0.1670	0.0459	0.5755	0.0888	-0.2362	0.6753
REM 10	0.4403	0.1296	-0.3703	-0.0170	0.5799	0.8261*

\*correlation is significant at the 0.05 level (two-tailed test)

\*\*correlation is significant at the 0.01 level (two-tailed test)

Source: own study

Square meter prices (property price variables group) is also negative correlating with value of exports of goods and services (negative correlation) and GDP per capita (domestic economic variables) - (positive correlation). Rate of change price (5 years) (property price variables group) is negative correlating with indicators of macroeconomic policy (i.e. real effective exchange rate), balance of payments (i.e. the current account balance measuring as percent of GDP) and social indicators (employment rate measuring as percent of total population). The strong correlations are between all property right variables (real estate market ratios) and selected variables of each group of country risk indicators. Rating of landlord and tenant law is positive correlating with private consumption measuring as percent of GDP and negative - with unemployment rate. Economic freedom index is positive correlating with balance of trade ratio. Property rights index is positive correlating with GDP per capita and employment rate. Ratios of real estate market such as rental yields, price/rent ratio and rental income tax (property rent variables) do not present a correlation with all country risk ratios.

## 5. Conclusion

By summarise, it was proved that real estate market indicators was related to / dependent on country risk ratios. The system of 22 indicators for eight EU Baltic Sea region countries for real estate market indicators and country risk was introduced. It includes four groups for country risk: domestic economic variables (3 indicators), macroeconomic policy evaluation (3 indicators), balance of payments (3 indicators) and three group for real estate market: property price (4 indicators), property rent (3 indicators) and property right (3 indicators). The MULTIMOORA method could be used while evaluating and standardizing real estate market

condition and country risk, because it is appropriately suit for case, where there are several alternatives (EU Baltic Sea region countries) and several objectives (indicators, which directly describe real estate market condition and country risk).

The strong positive correlation is between: square meter prices and GDP per capita, natural population change; landlord & tenant law rating and private consumption index; economic freedom index and real effective exchange rate; property rights Index and GDP per capita, employment rate. Strong negative correlation is observed between: square meter prices and exports of goods and services ratio; price change 5 years ratio and balance of trade rate, unemployment rate, employment rate; landlord & tenant law rating and unemployment rate. Such elements of real estate market variables as property rent variables are not very influencing all country risk ratios (relationship wasn't detected).

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### **References**

- [1] Brauers, W. K. M, Zavadskas, E. K., Turskis, Z. and Vilutiene, T. (2008). Multi-objective contractor's ranking by applying the Moora method, *Journal of Business Economics and Management*, vol. 9, iss.4, pp. 245-255.
- [2] Brauers, W. K. M. and Ginevičius, R. (2010). The economy of the Belgian regions tested with MULTIMOORA. *Journal of Business Economics and Management*, vol. 11, iss.2, pp. 173-209.
- [3] Brauers, W. K. M. and Zavadskas, E. K. (2006). The MOORA method and its application to privatization in a transition economy. *Control and Cybernetics*, vol. 35, iss. 2, pp. 445-469.
- [4] Brauers, W. K. M. and Zavadskas, E. K. (2010). Project management by MULTIMOORA as an instrument for transition economies. *Technological and Economic Development of Economy*, vol. 16, iss.1, pp. 5-24.
- [5] Eurostat (2018). *Statistics* [online]. [cit.2018-03-02]. Available at: <http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/themes>.
- [6] Global Property Guide (GPG) (2018). [online]. [cit.2018-03-02]. Available at: <http://www.globalpropertyguide.com/>
- [7] Gorzeń-Mitka, I. (2016). Leading Risk Management Determinants of Small and Medium-Sized Enterprises (SMEs): An Exploratory Study in Poland. *Eurasian Studies in Business and Economics*, vol. 3, iss. 1, pp. 289-298.
- [8] Gorzeń-Mitka, I. (2017). Bricolage concept in risk culture assessment. *European Journal of Sustainable Development*, vol. 6, iss. 1, pp. 335-343.
- [9] Gorzeń-Mitka, I. (2017). The Evolution of Risk Management Research: Changes in Knowledge Maps. *Problems of Management in the 21st Century*. vol. 12, iss.2, pp.106-121.
- [10] Gorzeń-Mitka, I. (2018). Leading markers of risk culture in organization. *European Journal of Sustainable Development*, vol. 7, iss.1, pp. 425-434.
- [11] Gorzeń-Mitka, I., Skibiński A., Lemańska-Majdzik, A. (2016). Rating of European Housing Markets by Multi-Objective Evaluation Method. In *International*

- Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 263- 272.
- [12] Gorzeń-Mitka, I., Sipa, M., Skibiński, A. (2017). Multifaceted character of the issues of age management, *Polish Journal of Management Studies*, vol. 16, iss. 2, pp. 110-121.
- [13] International Monetary Fund (IMF) (2018). *IMF Data* [online]. [cit.2018-03-02]. Available at: <http://www.imf.org/en/data>
- [14] Kuběnka, M., Slavíček, O. ( 2016.) Relationship Between Level Of Prosperity And Failure Prediction. In SGEM 2016: Political Sciences, Law, Finance, Economics and Tourism Conference Proceedings. Book 2. Vol. 3. Sofie: STEF92 Technology Ltd., pp.. 505-512. ISBN 978-619-7105-74-2.
- [15] Kuraś P. (2013), W kwestii przejrzystości rynku nieruchomości, In Marcinek, K. (eds.). *Inwestowanie w aktywa rzeczowe i finansowe*. Studia Ekonomiczne, vol. 155. Katowice: Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, pp. 213-224.
- [16] Lieser, K., and Groh, A. P. (2014). The determinants of international commercial real estate investment. *The Journal of Real Estate Finance and Economics*, vol. 48, iss. 4, pp. 611-659.
- [17] Mesjasz-Lech, A., Skowron-Grabowska, B. (2016). Competitive Processes on Foreign Markets and the Intelligent Enterprise. *Journal of Management and Financial Sciences*, vol. 9, iss.24, pp. 133-146.
- [18] Quer, D., Claver, E., and Rienda, L. (2007). The impact of country risk and cultural distance on entry mode choice: an integrated approach, *Cross Cultural Management. An International Journal*, vol. 14, iss.1, pp. 74-87.
- [19] Schroeder, S. K. (2008). The underpinnings of country risk assessment. *Journal of Economic Surveys*, vol. 22, iss. 3, pp. 498-535.
- [20] Sipa, M. (2017). Innovation as a Key Factors of Small Business Competition, *European Journal Of Sustainable Development*, vol. 6, iss.1, pp. 344-356.
- [21] Sitek M. (2012). Analiza i zarządzanie ryzykiem inwestycyjnym na rynku nieruchomości (Analysis and Managing the Investment Risk on the Market of the Real Estate), *Entrepreneurship and Management*, vol.13, iss. 18, pp. 181-192.
- [22] Skibiński, A. (2017). The Changes of the Population Structure and its Consequences in Selected EU Countries - Some Aspects, *European Journal of Sustainable Development*. vol. 6, iss. 1, pp. 357-368.
- [23] Stankevičienė, J. and Sviderskė, T. (2012). Country risk assessment based on MULTIMOORA. In *7th International Scientific Conference "Business and Management 2012"*. Vilnius, Lithuania, pp. 530-536.
- [24] Stankevičienė, J., Sviderskė, T. and Miečinskienė, A. (2013). Relationship between Economic Security and Country Risk Indicators in EU Baltic Sea Region Countries. *Entrepreneurial Business and Economics Review*, vol.1, iss.3, pp. 21-33.
- [25] The Global Economy (2018). [online]. [cit.2018-03-02]. Available at: [www.theglobaleconomy.com](http://www.theglobaleconomy.com)
- [26] World Bank (WB) (2018). *World Bank Open Data* [online]. [cit.2018-03-02]. Available at: <https://data.worldbank.org/>

## **Increasing Level of Tertiary Education = Increasing Employability of the Youth**

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### **Abstract**

*Cohesion policy is the principle investment policy of the EU. Its primary goal is to support formation of job opportunities, competitiveness of businesses, to enhance the economic growth, sustainable development, and to improve the life quality of citizens. And despite the fact that each of the member states established their own national goals in these spheres, they all share one interest. To be successful within the world market, one precondition must be met – the high-quality human resources which contribute to the production of the top and innovative goods and services. Tertiary education with the increasing preference of study fields and programs in relation to the narrow link to the economical and social needs as a response to the current needs of the labour market thus become one of the major topics of the cohesion policy for 2014-2020. The article presents the EU tertiary education key data, the specific features of the educational sector in the Czech Republic with the options for employability of university graduates within the labour market in continuity with the regional development.*

**Keywords:** *competitiveness, key competencies, non-profit sector, tertiary education, theory and practice*

**JEL Classification:** *I21, I25, H52, A23*

### **1. Introduction**

The distinctive feature of today is represented by the ever-accelerating changes reflecting in deepening of the long-term issues, being it globalization, the pressure on sources, or ageing of the population, significantly affecting today's Europe. However, it remains that the only eventuality for Europe to succeed in the given hectic era is to act collectively as the Union. The support of cohesion and balanced development together with increasing level of EU competitiveness thus belong to the temporary EU's key development objectives (Melecký, 2015). "New agenda requires a coordinated European response, including with social partners and civil society" (Barroso, 2010). The need of a strategy, which would make the EU an intelligent and sustainable economy supporting inclusion and exhibit the high level of employment, productivity, and social cohesion, gained on a real vision together with the document called *Europe 2020 Strategy* that in 2010 proposed the idea of the Europe's social market economy for the 21st century. *Europe 2020* pitched three priorities mutually supporting one another. The attention was aimed at the preference of the "intelligent (smart) growth" reflecting in the development of the economy based on knowledge and innovations; then to the "sustainable growth" in relation to the support of the more competitive and greener economy which is less demanding on sources, and the last but not least in the list of the priorities focusing on "the inclusive growth" with orientation to the support of the economy



with the high-level employment, which will be notable for social and territorial cohesion (Europe 2020, 2010). This strategy is and still is intended to make Europe the world's leading knowledge-based economy, based on the principle of sustainable development (Staničková, 2016).

### **1.1 EUROPE 2020 Strategy**

Among the prominent steps of the Commission Europe 2020 was particularly the submission of the seven flagship initiatives corresponding in direct continuity to the core priorities: “Innovation Union”; “A digital agenda for Europe”; “Resource efficient Europe”; “An industrial policy for the globalisation era”, and “European platform against poverty.” As for the point of view of the presented contribution, there are two main initiatives, namely the “**Agenda for new skills and jobs**,” whose primary task is to modernize labour markets in connection with the empowerment of citizens by developing their skills throughout their lives, which brings them better employment on the labour market, and at the same time “**Youth on the Move**” aimed at enhancing the performance of education systems in order to facilitate the entry of young people into the labour market. Higher education institutions then become significant partners in implementing the *Europe 2020 strategy* for the renewal and sustaining growth, which is reflected in one of the other aims of the strategy—which is reaching the state in which 40% of the European youth will have graduated from a university by 2020 (Europe 2020, 2010).

### **1.2 Education and Training for Growth and Jobs**

It is, therefore, a higher education linked to research and innovation, and their increasing role both in the development of individuals and the society as a whole. It is precisely the role of higher education institutions (HEI) in shaping the highly skilled labour force, which in the increasingly globalized knowledge-based economy is needed by the EU to compete in terms of productivity, quality and innovation, becomes the primary objective of the present. We can still find “the difference between the competencies required on the labour market and their real supply, which contributes to the unemployment increase, and in reducing the economic growth” (European Commission 2018). Some necessary strategic documents belong to the definition of the basic goals determining the direction of the Czech academic system. At the European level, the *Education and Training 2020* (ET 2020) presents a strategic framework for the European cooperation in education and training (ET 2020) following the *Education and Training 2010* (ET 2010) work program. The *ET 2020* strategy focused its attention primarily on improving the quality and effectiveness of education and training, coupled with improving creativity and innovation and entrepreneurship at all levels of education and training, and at the same time promoting active citizenship. At the level of higher education, *The Strategic Plan for the Scholarly, Scientific, Research, Development and Innovation, Artistic and Other Creative Activities of Higher Education Institutions for 2016-2020* becomes the key strategic material. It is education and training that enhances the personal development of citizens, their social engagement, and that promotes equality, social inclusion and cohesion (MŠMT, 2018).

## **2. Problem Formulation and Methodology**

And what is the real state of the matter? It is about 50% of young people with only secondary qualifications, which is reflected in insufficient satisfaction of the labour market requirements. Less than one in three people aged 25 to 34 then achieved higher education (USA/40%,

Japan/<50%). The priority is to improve the results and international attractiveness of European higher education institutions (OECD, 2017). This is related to an increase in the overall quality of all levels of education and training in the EU, which would combine a high level and a fair approach, encourage the mobility of students and trainees, and improve the employment situation of young people, which is still not without the needful “modernization of higher education system,” whether the curricula, management, or funding. What remains the priority is the implementation of the youth employment policy framework aimed at reducing youth unemployment, which, with the help of the Member States and the social partners, will support the entry of young people into the labour market through *vocational training, traineeships or other forms of professional practice*. This is related to a better targeting of education outcomes to the labour market needs, coupled with improving young people’s entry into the labour market through an integrated activity including, among other things, providing information, advising and consultancy, and the interdependence of the business or non-business sphere.

## 2.1 Current Indicators

What do the particular outcomes show provided we aim our attention to the Czech Republic?

### 2.1.1 Employment Indicators

**Table 1: Employment Indicators in the Czech Republic in 2013-2016**

<b>EMPLOYMENT</b>				
<b>(thous. persons)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Working persons in the national economy<sup>1)</sup></b>	4937.1	4974.3	5041.9	5138.6
Industry	1 431.7	1 478.2	1 521.0	1 569.8
Construction	420.3	413.9	396.0	386.3
Financial and insurance activities	137.3	121.5	118.1	117.2
Education	322.6	326.2	322.8	338.6
Health	339.3	353.5	351.6	360.4
<b>The unemployed, total<sup>1)</sup> (thous. persons)</b>	368.9	323.6	268.0	211.4
<b>By educational attainment</b>				
Primary education	71.5	58.1	58.7	54.0
Secondary educ. without A-level examination	163.3	138.2	108.5	80.4
Secondary educ. with A-level examination	102.9	94.0	72.1	53.3
<b>Higher education</b>	<b>31.3</b>	<b>33.3</b>	<b>28.7</b>	<b>23.6</b>
<b>By age group</b>				
up to 19	12.7	12.6	9.7	6.8
20–29	102.9	86.0	71.5	58.4
30–39	99.4	86.9	72.0	50.7
40–49	71.9	66.7	52.0	41.4
50–59	70.8	61.2	54.4	44.2
60+	11.3	10.1	8.5	9.9
<b>General unemployment rate<sup>1)</sup> (%)</b>	7.0	6.1	5.0	4.0

1) Data are weighted according to data of the demographic statistics, which reflect the 2011 Population and Housing Census results. Source: Labour Force Sample Survey.

Source: Czech Statistical Office— Czech Republic in numbers 2017

The results in Table 1 indicate what the current situation is as viewed in terms of employment, where from an overall viewpoint we can see a gradual increase in the number of jobs (4 937.1–5 138.6 thous.), which illustrates the improving situation on the labour market. We can observe another gradual increase of jobs in the sector of education (322.6–338.6 thous.), health (339.3–360.4 thous.), and industry (1 431.7–1 569.8 thous.), whereas a decrease was recorded in the banking sector (137.3–117.2 thous.), and in construction (420.3–386.3 thous.). The current state of affairs also reflects the number of the unemployed, where the continuation of the number of employed persons decreases (368.9–211.4 thous.), together with the decrease in the general unemployment rate, which decreases in 2016 compared to 2013 by 3% (from 7% to 4%). An important indicator is seen in the comparison of unemployment from the point of view of education, where it is clear that even though we see an improving situation reflected in a gradual decline at all levels of education, the smallest number of unemployed is recorded at the university level (CSO: Employment, 2017). Here again, we can confirm that together with the declining acquired qualification also leads to declining opportunities for employment. The fact that the unemployment rate of tertiary educated Czech citizens is relatively low compared to other EU22 countries represents a positive finding. As revealed by the latest published results, only 3.1% of people with a bachelor's degree are unemployed, compared with an average unemployment rate of 6.3% in the EU22; a similar situation is also with the individuals with a master's degree (2% vs. 5%). Higher levels of education support not only higher employability but, in general, also the potential to receive higher incomes. In comparison with secondary school graduates, a tertiary-educated individual in the Czech Republic has a 92% higher income on average, which is higher than the EU22 average, where tertiary-educated population receive on average 52% higher income than those with a mere secondary education (Country Note Czech Republic EaG 2016, 2017). Compared to the OECD indicators it was confirmed that adult tertiary-educated graduates not only achieved significant returns on their investments because they are more likely to be employed by 10 percentage points, but their earnings are on average 56% higher than of those who completed only higher secondary education. They are also the first to recover from economic downturns, which is confirmed by the employment rate of young graduates of universities returning to the pre-crisis levels, while the employment rate of those who have not completed higher secondary education is still lagging behind (OECD, 2017). The demand for university graduates is historically high, Dombrovský says, who is an analyst at Jobs.cz and who confirms that "businesses search for 140 000 people through the labour office, one quarter of which was designated in 2016 even for university graduates, with only 12% of positions in 2012" (2017, iDnes/ Economics).

### *2.1.2 Educations Indicators*

The rapid quantitative expansion of the number of university students taking place since the 1990s in the Czech Republic has shown the need to stabilize the education sector in connection with the creation of such conditions that would lead to the completion of mechanisms leading to the improvement of the education system not only in terms of efficiency but particularly in terms of quality. The attention is therefore focused on the development of a sufficiently heterogeneous offer of university degree programs in terms of content and form of teaching, in continuity with the increase of the number of highly qualified academic staff (Table 2). The priority is being given to making higher education institutions more open to the interests of employers, broader civil society, as well as of the regions. "Issues of competitiveness and productivity at a regional level have increasingly been a focus for academic and policy concern. Factors directly linked to accumulation of knowledge and innovation have therefore become the main sources of growth" (Staničková, 2014).

**Table 2: Education Indicator in 2013–2016**

<b>EDUCATION*)</b>				
	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Schools (number)</b>				
Universities <sup>1)</sup>	73	71	69	68
<b>Students in:</b>				
Public and private universities	367 756	346 909	326 551	311 367
<b>Programmes:</b>				
Bachelor study programme	224 445	207 253	192 389	179 949
Masters study programme	121 803	118 386	112 891	110 641
Doctoral study programme	24 719	24 210	23 868	23 226
<b>Teachers<sup>2)</sup> and lecturers in:</b>				
Public universities				
Professors and readers	4999.5	4891.5	5032.6	5163.7
Other teaching staff	9786.2	9619.3	9862.7	10 422.0
Public expenditure on education (CZK mil.; current prices)	172 805	178 713	182 848	173 448

\*) MEYS. 1) All universities, i.e. public, private, and state universities. 2) Full-time equivalent.

Source: CSO—Czech Republic in numbers 2017

A good knowledge of the labour market needs is reflected in the creation of the basis for the long-term employability of graduates as well as in the setting up the conditions leading to the easier transition to the labour market from those parts of the educational system that prepare students for their immediate employment. The Czech Republic is currently implementing a reform of higher education from 2016, which aims to increase the accreditation standards, internal quality assurance, and to provide greater autonomy to institutions with functioning internal quality assurance systems. This is also related to the establishment of a new independent *National Accreditation Office*, and the establishment of new accreditation standards. Students themselves are also involved in the accreditation and evaluation program. The current changes in education are reflected in the transformation of the students' position, the student is now in the role of a client in many respects, and they also remain members of the academic community. The reform also includes the support for the diversification of the programs offered, which extend professional-oriented programs with an emphasis on direct practical experience. "A key goal of the university education is a necessity to help students learn responsibility for aspects of their own learning" (Haigh, 1994).

### 3. Problem Solution

Although university graduates are doing better on the labour market than their less qualified peers, as shown by the previous results, higher education systems must provide students with education that prepares them for the changing future. "The world is changing. Globalization is impacting all of us and changing the way we interact in the labour market. The skills needed in today's workplace are different than what was needed several years ago" (Melecký, 2016). The development of an appropriate offer of higher education becomes the priority, which is based on the establishment of links between HEIs and the professional sphere with a focus not merely on teacher-classroom practices but towards student-oriented models and practical approaches in the form of active learning, which brings a necessity reflected in the combination of theory and practice. The aim is to meet the ever-increasing demand for

higher-skilled workers in direct continuity with the corresponding level of key competencies of university graduates required by employers, from whether the commercial or non-commercial sphere.

We are talking about the development of *key competencies* representing “the sum of knowledge, skills, abilities, attitudes, and values necessary for the personal development and empowerment of each member of the society” (Belz and Siegrist, 2001) which contribute to the education of an individual, to their satisfied and successful life, and also to strengthen the functions of the civil society. An overview of the *secondary (industry) sector* employers’ needs has shown that the first three ranks of the focus of universities should primarily be: to bear the responsibility (56.4%), **the art of dealing with people** (54.9%), and foreign language skills (51.8%); whereas as viewed in terms of job titles they then prefer (absolutely necessary/important): to bear responsibility (91.6%/8.4%), decision-making abilities (85.7%/14.0%), and the ability to deal with the problem (90.5%/9.1%) (Doležalová and Vojtěch, 2013). In the case of employers in the *tertiary (service) sector* and the *quaternary (knowledge) sector*, the prevailing consensus prevails in the preference of the first three competencies: **the ability to deal with people** (53.7%; 61.27%), to take responsibility (48.9%; 61.4%), and the ability to deal with stress (48.2%; 58.0%). In terms of employment: mastering information processing (76.6%/23.4%), IT skills (80.4% /19.6%), and **the ability to deal with people** (83.7%/16.3%) are the first and foremost competencies; in the *quaternary sector* it then is: **communication skills** (87.2%/12.2%), reading and comprehension to work instructions (85.9% /13%), and the problem-solving ability (84.1% /15.6%) (Doležalová, 2014, 2014). The results of the IBM CEO Study, which focused its attention on the opinions of more than 1,700 CEOs from 64 countries, bring some interesting findings on the issue. From the perspective of their positions, they considered the overriding key skills in the overwhelming majority to be: **teamwork/cooperation** (75%), **communication/communication skills** (67%), **creativity** (61%), and **flexibility** (61%) (Jaké vlastnosti si cení CEO? (What qualities are the CEO's worth?), 2013), which-as well as the former key skills preferences-fully corresponds with the research surveys conducted at UMC FMC TBU (see Table 3).

### 3.1 Academic Sphere and Non-profit Sector

However, the non-profit sector is also a significant potential in the capacity of university students and graduates for the employment within the labour market, they are especially non-governmental non-profit organizations (NGOs). These are still severely affected by the shortage of workers, whether permanent or external employees (e.g. fundraisers, marketing specialists, etc.), volunteers, trainees and interns. The problem is the lack of marketing professionals, not to mention entire marketing departments. “It is no coincidence that implementation of innovation into business is put to the forefront more often in continuity with marketing, thus representing a major rival in the competitive battlefield, in both the profit sector as well as more prominently in the non-profit sector” (Juříková, 2013). This unchanging situation reflects especially in the persistent ineffective communication of missions and activities, and at the same time in the longstanding insufficient innovative and marketing thinking, as evidenced by the research carried out since 2012 at the Institute of Marketing Communications of the Faculty of Multimedia Communications at Tomas Bata Zlín University (IMC FMC TBU) when at the beginning of the set line stood the project of *Co-operation of Higher Education, Public Administration, Business and Non-Profit Sector for the Socio-Economic Development of the Region (Kooperace vysokého školství, veřejné správy, podnikatelského a neziskového sektoru pro socioekonomický rozvoj regionu*, 2012), fulfilling its essence within the Zlín Region (Göttlichová, 2012).

The solutions addressing the problem also contributed to the results of the research carried out in two phases (the contemporary marketing communications standards of NGOs, and the preference of cooperation forms with the reflection of the requirements for key competencies), with orientation both to the students of the university (120 students of FMC FMC TBU, bachelor study), as well as to the NGOs in the Zlín Region (232 NGOs) through a questionnaire survey.

**Table 3: Preference of Key Competencies in Terms of NGOs and University Students**

Key competencies/preference	NGO		Students	
	%	ranking	%	ranking
<b>Communication skills</b>	<b>81.0</b>	<b>1</b>	<b>77.5</b>	<b>1</b>
<b>Capability of problem-solving</b>	<b>75.9</b>	<b>2</b>	<b>55.0</b>	<b>2</b>
<b>Team working skills</b>	<b>63.8</b>	<b>3</b>	<b>37.5</b>	<b>3</b>
Willingness to learn	58.6	4	12.5	7/8
To take responsibility	53.4	5	30.0	5
Mastering information processing	48.4	6/7	22.5	6
Adaptability and flexibility	48.3	6/7	32.5	4
Ability to make decisions	43.1	8	12.5	7/8
IT skills	32.8	9	2.5	10–13
Reading and comprehension to work instructions	19.0	10/11	7.5	9
Leadership skills	19.0	10/11	2.5	10–13
Foreign language knowledge	12.1	12	2.5	10–13
Work with number in the working process	69	13	2.5	10–13

Source: author's elaboration, 2018

From the point of view of the required competencies (Table 3), the two target groups explicitly preferred the first three entries: **communication skills**, **capability of problem-solving**, and **team working skills**. The specificity that corresponds directly to the NGOs missions is the extension of the list of competencies required by NGOs (33.3% of NGOs perceive the list as complete), whether it is “the respect for the other, ethical and moral stability, etc.” Communication skills (72.5%), the capability of problem-solving (52.5%), and teamwork and the willingness to work represented by the same percentage (32.5%) were claimed by the students in their responses to be the list of three acquired or improved skills and abilities throughout their studies, which the students regard to be the most beneficial. On the other hand, among the competencies which students still experience to be inadequately managed, the respondents assigned to: working with numbers in the working process (65%), IT skills (42.5%), together with proficiency in foreign languages (42.5%).

The confirmation of the growing interest of NGOs in expanding cooperation with the FMC listeners (69%) with a preference for the cooperation in the field of marketing and promotion (75%) represents a significant potential not only in the increasing possibilities of employing the younger generation on the labour market also in the future, but also in strengthening the competitiveness of NGOs, because as the results of the survey show, although there is a gradual improvement in the area of marketing and promotion (29.3% of NGOs confirmed employing a qualified specialist, and 3.4% even facilitating a special marketing department),

51.7% of NGOs confirmed that marketing and promotion are addressed by any of their employees (44.9%), (persistent beliefs of) the “redundancy” of a professional marketer (30.6%), and (gradually decreasing percentage of) human resources shortages (14.3%). The students perceive the state of communication of NGOs to be unconsolidated (47.5%), which is associated with significant deficiencies. They clearly identify with the possibility of the necessary cooperation (50.0%), especially in the area of marketing and promotion in the phase of preparation and realization of projects in continuity with the creativity reflected in the marketing innovations of the organizations. They perceive NGOs, for example, “as entities involved in solving social issues with the development of the plurality of opinions on solutions of such issues, promoting a good cause, empowering citizens to feel responsible for themselves and their surroundings, reinforcing the feeling of cohesion with the cohesion and community, increasing the sense of belonging to a specific municipality, community, or region.”

The acquired knowledge becomes the basis for a special course called *Projects of Non-Profit Organizations (PNPO)*. The course content is an extension of the reciprocal cooperation with NGOs focusing on the elaboration of NGO projects in the contemporary social context of the partner environment, while the emphasis is put on a system theoretical solution of all phases of the marketing process, as well as their practical implementations. It is purely a practical subject where students learn about the work of regional NGOs in practice, not just on a theoretical basis. Students will learn the specifics of teamwork, they will learn to discuss, process, and prepare written documentation, learn about their own abilities and the importance in searching for a proper approach to their solutions, planning, realization and evaluation of the efficiency of the output (Göttlichová, 2015). “They are aware of the necessity of professional communication based on the accurate definition of communication goals based on marketing goals” (Šula, 2017). The benefit is not only to deepen their interest in the region (with possible future profiling on non-commercial marketing communications), but also to try to realize a project with everything that project management involves.

#### 4. Conclusion

As suggested in the title of the article, the aim of the paper was not only to document the current state of higher education in the Czech Republic in continuity with the applicability of current graduates in the labour market, but also to point out the persisting need for improving the quality of tertiary education in relation to the needs of the labour market. Whether we are talking about the key message of “the White Paper on the Future of Europe”, “Investing in Europe’s Youth”, and “the New Skills Agenda for Europe”, as well as the EU’s “pillar of social rights”, and “the reflection paper on harnessing globalisation” – all of them identify education and the necessity of matching skills as a priority in the process for Europe’s better future. The demand for highly qualified and socially committed people has not only been increasing, however, by 2025 half of all jobs will have been requiring high qualifications, but at the same time they are undergoing changes (COM (2017) final, 2017). Although career opportunities ultimately depend on employers and the wider economy, education and training still play a key role. Satisfying the increasingly intense demand for higher skilled workers directly corresponds to the level of key competencies required by employers in university graduates, whether we are speaking about commercial or non-commercial entities, as the results of the presented investigations showed. Graduates thus have to be able to clearly demonstrate the basic knowledge and skills necessary for their employability in practical business, which means the turnover in the persistent tendency of the current declining level of their practical readiness for particular jobs. Higher education institutions have an obligation to ensure that

the content of education is up-to-date, to provide relevant study programs in areas with skill shortages, while developing learning and teaching methods to enable students to acquire the necessary broad and deep skills. It is more than obvious that a high-quality workforce able to participate in the production of top-notch and innovative goods and services is a success in the existing competitive environment of the world market. The aim of the paper was also to show how the non-profit sector represents a significant potential in the possibility of professional involvement of university students and graduates, especially then that NGOs still face the lack of professional staff, presenting one of the possible ways to solve the current poor state in continuity with the regional development. The priority is to form such a curriculum which would be based on the application of key competencies within the educational process, and on the requirements coming from the practice and reflecting in learning innovations.

## References

- [1] Barroso, J. M. (2010). A European strategy for smart, sustainable and inclusive growth. Europe 2020.
- [2] Belz, H. and Siegrist, M. (2001). Klíčové kompetence a jejich rozvíjení: Východiska, metody, cvičení a hry. (Key competences and their development: Basis, methods, exercises and games.) Prague: Portál.
- [3] Country Note Czech Republic EaG 2016. MŠMT (Ministry of Education, Youth and Sports.) [online]. [cit. 2018-02-26]. Available at: <http://www.msmt.cz/vzdelavani/skolstvi-v-cr/statistika-skolstvi/ceske-skolstvi-v-mezinarodnim-srovnani>.
- [4] COM (2017) 164 final. 2017. COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. Brusel 30. 5. 2017. [online]. [cit. 2018-02-26]. Available at: [https://ec.europa.eu/education/sites/education/files/he-com-2017-247\\_en.pdf](https://ec.europa.eu/education/sites/education/files/he-com-2017-247_en.pdf).
- [5] SCO. (2017). Czech Republic in Figures 2017: Employment and Education. [online]. [cit. 2018-02-24]. Available: <https://www.czso.cz/csu/czso/czech-republic-in-figures-2017>.
- [6] Doležalová, G. and Vojtěch, J. (2013). Potřeby zaměstnavatelů a připravenost absolventů škol—šetření v sekundárním sektoru. (Employers' needs and the readiness of school—leavers in the secondary sector.) Praha: Národní ústav pro vzdělávání, školské poradenské zařízení a zařízení pro další vzdělávání pedagogických pracovníků. (National Institute for Education, Educational Counseling Facilities and Facilities for Further Education of Educational Workers.)
- [7] Doležalová, G. (2014). Potřeby zaměstnavatelů a připravenost absolventů škol—šetření v kvartérním sektoru. (Employers' needs and the readiness of school—leavers in the quaternary secondary sector.) Praha: Národní ústav pro vzdělávání, školské poradenské zařízení a zařízení pro další vzdělávání pedagogických pracovníků. (National Institute for Education, Educational Counseling Facilities and Facilities for Further Education of Educational Workers.)
- [8] Doležalová, G. (2014). Potřeby zaměstnavatelů a připravenost absolventů škol—šetření v terciárním sektoru. (Employers' needs and the readiness of school—leavers in the tertiary sector.) Praha: Národní ústav pro vzdělávání, školské poradenské



- zařízení a zařízení pro další vzdělávání pedagogických pracovníků (National Institute for Education, Educational Counseling Facilities and Facilities for Further Education of Educational Workers.)
- [9] Dombrovský, T. E. (2017). Studentům roste sebevědomí, za patnáct hrubého už pracovat nechtějí. (Students are becoming more self-confident, they do not want to work for the rough fifteen.) [online]. [cit. 2018-02-24]. Available: <https://ekonomika.idnes.cz/prehled-top-zamestnavatele-a-pruzkum-mezi-studenty-fyy-/ekonomika>.
- [10] Europe 2020. (2010). COMMUNICATION FROM THE COMMISSION, COM(2010) 2020. [online]. [cit.2018-02-12]. Available at: <http://ec.europa.eu/eu2020/pdf>.
- [11] Evropská komise. (2017). Monitor vzdělávání a odborné přípravy 2017, Česká republika. [online]. [cit. 2018-02-12]. Available at: [https://ec.europa.eu/education/sites/education/files/monitor2017-cz\\_cs.pdf](https://ec.europa.eu/education/sites/education/files/monitor2017-cz_cs.pdf).
- [12] Göttlichová, M. (2012). *Co-operation of Higher Education, Public Administration, Business and Non-Profit Sector for the Socio-Economic Development of the Region*.
- [13] Göttlichová, M. (2015). Proceedings of non-profit projects. Zlín: Tomas Bata University UTB.
- [14] Haigh, N. (1994). Promoting Intellectual Independence: A Legislative Catalyst. Teaching and Learning Development Unit, University of Waikato.
- [15] Jaké vlastnosti si cení CEO? (What qualities are the CEO's worth?) (2012). Moderní řízení. [online]. [cit. 2018-02-18]. Available at: <https://modernirizeni.ihned.cz/c1-56740850-jake-vlastnosti-si-ceni-ceo>
- [16] Juříková, M. (2013). Marketing services. Opportunities and Limits of the Implementation in Czech Firms. Zlín: VeRBum.
- [17] Melecký, L. (2015). Assessment of Socioeconomic Development of Visegrad Four NUTS 2 Regions Using Composite Indices. In 12th International Conference Economic Policy in the European Union Member Countries. Karviná: Silesian University, pp. 561- 571.
- [18] Melecký, L. (2016). Changing of EU Project and Grant Management Approach in Response to New Trends of Programming Period 2014–2020. In Proceedings of the 3rd International Conference on European Integration 2016. In International Conference on European Integration 2016. Ostrava: Technical University, pp. 605–614.
- [19] MŠMT. (Ministry of Education, Youth and Sports) (2018). Strategické materiály. (Strategic materials.) [online]. [cit. 2018-02-18]. Available at: <http://www.msmt.cz/vzdelavani/vysoke-skolstvi/strategicke-materialy>.
- [20] OECD. (2017). Education at a Glance 2017: OECD Indicators, OECD Publishing, Paris. [online]. [cit. 2018-02-12]. Available at: <http://dx.doi.org/10.1787/eag-2017-en>.
- [21] Staničková, M. (2014). Competitiveness Factors in Regional Growth: the Case of Central and Eastern European Countries. In Proceedings of the 2rd International Conference on European Integration 2014. In International Conference on European Integration 2014. Ostrava: Technical University, pp. 634–643.

- [22] Staničková, M. (2014). Practical Aspects of EU Project and Grant Management in Programming Period 2014-2020. In Proceedings of the 3rd International Conference on European Integration 2016. In International Conference on European Integration 2016. Ostrava: Technical University, pp. 898–907.
- [23] Šula, T. (2017). Ambientní media v reklamě: význam designu při tvorbě ambientních médií. (Ambient media in advertising: the importance of design in the creation of ambient media.) Zlín: Tomas Bata University.

## **Social Capital in European Countries and Its Role in Integration Processes- Selected Issues**

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### **Abstract**

*Social Capital defined as „networks together with shared norms, values and understandings that facilitate co-operation within or among groups” (OECD, 2001) is now perceived by economists as one of important resources in economic and social processes (also in integration processes). It influences on the ability of market entities to in the area of cooperation with each other and creation their competitiveness. The level of Social Capital and its role is diversified among European Countries and their Regions i.e. in the Scandinavian Countries the level of Social Capital is higher than in the South or Central Europe. The paper is divided into two parts: a theoretical and an empirical one. In the theoretical part the main purpose is to identify the most crucial issues related to social capital, its role in economic and social development as well as factors that have impact on it. The empirical part presents some aspects of social capital in European Countries and its role in integration processes.*

**Keywords:** *economic development, economic systems, European integration processes, transitional economics, welfare*

**JEL Classification:** *P30, O10, I30, Z10*

### **1. Introduction (Social Capital)**

In response to occurring questions about the sources of rationality of conduct in contemporary management processes, the ability of entities establishing relationships to continuously overcome barriers and expand the limits in the process of adaptation to changing living conditions is often indicated (Czapiński, 2015, p. 54). This ability is the cornerstone of emerging social capital that is one of the most important resources of society's wealth and management effectiveness of individuals nowadays. Social capital is the subject of many discussions conducted in the literature of the subject. J. Coleman's, F. Fukuyama's, P. Bourdieu's or R. Putnam's proposals are most frequently mentioned in the literature. (comp. Tab.1)

It results from definitions presented by the authors that social capital is a multidimensional notion. It can be discussed from the perspective of an individual, their resources and possibilities to establish relationships with other individuals, as well as entire communities, their resources and possibilities to establish internal relationships between their members, and external ones - with other communities (Grabowska-Powaga, 2016).

**Table 1: Selected Definitions of Social Capital**

<b>Author</b>	<b>Year</b>	<b>Definition</b>
<b>P. Bourdieu</b>	1986	Social capital is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words, to membership in a group – which provides each of its members with the backing of the collectivity-owned capital, a ‘credential’ which entitles them to credit, in the various senses of the word”.
<b>R. Putnam</b>	1995	„Social capital refers to such features of social organization as networks, norms, and social trust that may increase society efficiency while facilitating coordination and cooperation. Similarly to other forms of capital, social capital is productive because it enables achievement of some goals that would not have been achieved without it [...]. For example, a group, the members of which show that they are trustworthy and who trust others, can achieve considerably more than a comparable group in which there is no trust [...] Spontaneous cooperation is easier thanks to social capital”.
<b>J.S. Coleman</b>	1998	„A group of social entities that have two characteristics in common: they all consist of some aspect of social structure and they facilitate certain shared actions of individuals and entire institutions within the structure. Similarly to other forms of capital, social capital is productive – it enables implementation of some goals that would not have been achieved in its absence”
<b>F. Fukuyama</b>	2001	„Social capital is objectified, informal norm that promotes cooperation between two entities or their larger number... Social capital is vital for the efficient functioning of modern economies, and is the sine qua non of stable liberal democracy”

Source: Own study

Definitions presented in the literature of the subject, describe social capital as a resource. Beside traditional production factors such as land and labour, as well as contemporary ones, for example knowledge, social capital is becoming an economic resource for entities in market processes. Within social capital approached as a resource, several components are distinguished, including structural capital (networks of relationships between entities), formal institutions, such as legal norms regulating interactions between people, their rights to other resources, and other informal institutions such as trust, shared traditions, beliefs and attitudes. (Matysiak, 1999, pp. 60-61). In W. Eucken’s view, both formal and informal institutions constitute the “rules of the game” (Eucken, 2005, p.161). They control every market mechanism and are the subject of order enforcement in each economic system. There are diverse forms of social capital. However, it must be remembered that at the basis of all its types, regardless of the criterion of social capital division, there are expectations of entities entering relationships that should lead to behaviours aiming at establishment of cooperation. Division into relationship capital and institutional capital is one of suggestions found in the literature. Transaction is the basis for collective activity in institutional capital, whereas in relationship capital, it is the relationship. The roles performed by the entities on market, procedures and principles are the sources of motivation in behaviours of individuals shaping institutional capital, whereas for entities creating relationship capital, the values, beliefs and shared ideologies are the source of motivation. This heterogeneity of both capitals also refers

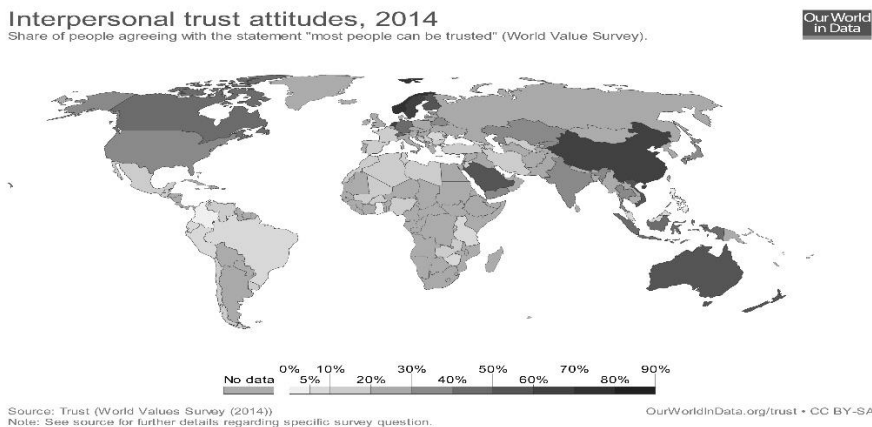
to behaviours of individuals – in institutional capital they strive for maximisation of their behaviour, in relationship capital they are adequately adjusted to situations in which relationships are established. Therefore, an assumption can be adopted that relationship capital is built on foundation of the institution with predominant informal institutions and institutional capital is primarily shaped by formal institutions. Societies in which both strong institutional capital as well as strong relationship capital occur, are characterised by prominent level of social capital. On the other hand, deficient institutional capital and relationship capital imply the lack of social capital expressed by entities in behaviours devoid of moral principles. Strong organisations are an example of poor relationship capital and strong institutional capital, whereas traditional associations are an example of strong relationship capital and poor institutional capital. Another classification of social capital found in the literature is the one that divides it by the level of its formalisation. Formal and informal social capital are distinguished. Formal capital can be characterised by means of such rates as the level of social trust or the level of altruism in a given society. Formalised social capital helps to shape stronger, more efficient informal relationship networks among the members, and to strengthen cooperation and trust in a given society. Formal organisation acting for formation of civil society can be an example of formal capital. On the other hand, informal social capital is expressed through informal institutions (e.g. relationships between people). This capital is shaped by them either while considering rational behaviour and benefits resulting from establishment of relations, or regarding subjective willingness to have close relationships and establish friendship. Trust of individuals in each other is an example of informal capital (Pichler, Wallace, 2007, pp.423-424) In both classifications some similarities can be observed. Similarly to informal capital, relationship capital is built on the foundation of informal institutions, whereas both informal as well as formal institutions are the basis for establishment of institutional capital and formal capital. Propositions of identification of diverse forms of social capital presented before, do not exhaust classifications presented in the literature of the subject. However, they confirm the thesis about the complex character of the studied issue. Classification of social capital division into formal and informal allowed for making an attempt to describe the level of social capital in the European countries in further part of the paper. Social capital performs a vital role in socio-economic processes as well as in integration processes within communities (e.g. European Community). Consequences of the occurrence of social capital imply both its positive and negative impact on management processes. Thus, just like every resource applied in market processes, social capital has its advantages and disadvantages. Both positive and negative qualities resulting from social capital can be analysed from the point of view of an individual, entire group / community in which a given individual functions, and globally. Social capital is not only a resource of an individual or a group, but it is also perceived as public good. It is a determinant of development, progress, economic growth, as well as a prerequisite for stable liberal democracy. It also implies a series of economic profits (including reduction of risk and transactional costs, impact on contractors' reliability, influence on the growth of innovativeness of communities and organisation on market among others, that are frequently emphasised by the authors), and social benefits (i.e. growth of solidarity between managing entities, among others). On the other hand, restricting the access to resources to people from the outside of the community and intense social control that limits autonomy of individuals and forces independent people either to accept standards functioning in a group, or to leave the group can be its defect.

Due to formal demands, analysed aspects concerning social capital constitute only a part of discussed issue. However, even in such a concise approach they show that it is a crucial resource in economic and social processes and can perform a crucial role in integration processes.

## 2. Social Capital in Europe – Selected Issues

Social capital is a multi-dimensional phenomenon, and a research issue of a qualitative nature rather than quantitative. The authors have made attempts at quantification of social capital while applying various measures for this purpose. The level of trust that is often also applied as an index in research concerning the issue under consideration, is one of the expressions of social capital (Knack & Keefer, 1997, pp.1251-88; Paxton 1999, pp.88-127; Beugelsdijk&Van Schaik, 2005, pp.301-2) (comp. graph 1).

**Figure 1: Level of Trust Towards Each Other in the World in 2014**



Source: Trust, World Values Survey, 2014, online on [www.ourworldindata.org](http://www.ourworldindata.org)

There is a correlation between prominent level of trust of citizens of a given state or region and development of social capital. Considering the subject analysed in this paper, it can be stated that the level of both the trust among the citizens of Europe and the level of social capital in the countries under consideration is diversified. Thanks to secondary research, conducted regularly by world institutions (including Worldbank and Eurostat), it is possible to determine the level of trust of the citizens of Europe towards each other and towards formal institutions (such as legal or political system). (comp. tab. 2)

Scandinavian countries are characterised by prominent level of trust of people towards each other (Denmark inhabitants are characterised by the highest level of trust), and social trust towards formal institutions, e.g. in legal system (the highest in Denmark) or political system (the highest in Finland). On the basis of presented trust index, and while considering other rates (like for example Global Competitiveness Index), it can be concluded that in Scandinavian countries the level of social capital in all its forms is the highest in Europe.

**Table 2: Trust in Different Regions of Europe**

Country	Trust in others	Trust in formal institutions	
		Political system	Legal system
<b>EU -28</b>	5.8 <sup>6</sup>	3.5	4.6
<b>Nordic Countries</b>			
Denmark	8.3	5.9	7.5
Sweden	6.9	5.6	6.7
Finland	7.4	6.0	7.2
Norway	7.3	5.9	7.2
Iceland	7.0	3.7	5.7
	∑ 7.38	∑ 5.42	∑ 6.86
<b>Western-Central Europe and British</b>			
Irish:	5.0	3.0	4.5
France,	5.5	4.9	5.3
Germany,	5.7	4.6	5.0
Belgium,	5.5	5.0	5.3
Luxembourg,	6.9	5.5	6.2
Netherlands,	5.9	4.4	6.0
Austria,	6.4	6.6	7.0
Switzerland	6.1	3.8	5.5
United Kingdom,	6.4	3.2	5.1
Ireland	∑ 5.93	∑ 4.55	∑ 5.54
<b>Southern Europe</b>			
Portugal,	5.3	1.7	2.9
Spain,	6.3	1.9	3.1
Italy,	5.7	2.1	3.6
Greece,	5.3	2.0	4.1
Malta,	6.2	5.7	4.9
Cyprus	4.5	2.6	3.6
	∑ 5.55	∑ 2.67	∑ 3.7
<b>Eastern-Central, Baltic, Balkan</b>			
Poland,	6.0	3.5	4.2
Czech Republic,	5.3	3.7	3.8
Slovakia,	5.8	3.5	3.6
Hungary,	5.3	4.5	5.1
Slovenia,	6.5	1.8	2.7
Estonia,	5.8	4.4	5.2
Latvia,	6.5	3.6	4.5
Lithuania,	6.1	4.5	4.9
Bulgaria,	4.2	2.6	3.0
Romania	6.4	4.8	5.8
Serbia	4.2	3.2	3.4
Croatia	5.1	2.8	3.3
	∑ 5.6	∑ 3.57	∑ 4.12

Source: Eurostat: Subjective well-being and trust items, by country, 2013

<sup>6</sup> On a scale of 0 to 10 where 0 corresponds to the lowest and 10 to the highest level of trust

On the other hand, the countries of Western Europe and British Isles are characterised by lower level of trust and social capital than Scandinavian countries. A comparable lowest level of trust in people in Europe is observed in the countries of southern Europe, Central and Eastern Europe, in the Baltic States and in the Balkans (Bulgaria is in the last place). They are characterised by both lower level of trust as well as lower level of formalised social capital in comparison to other European states. Residents of Southern Europe have the least trust in formal institutions (the lowest level of trust in political system is presented by residents of Portugal). On the other hand, residents of Slovenia have the least trust in legal system. (Pichler, Wallace, 2007, p.426). (comp. tab.3)

**Table 3: Formal and Informal Institutions Creating Social Capital in European Countries**

Regions of Europe	Trust	Formal Social Capital	Informal Social Capital
Nordic Countries	high	high	high
Western-Central Europe and British Irish	average	middle	high
Southern Europe	average	low	high
Eastern-Central, Baltic, Balkan	Average but lower than it other European regions	low	Rather low but with tendency do change (is regarded as important factor in human relations)

Source: own study based on i.a. Pichler, Wallace, 2007, p.426

The low level of social capital in the countries of Central and Eastern Europe, in the Balkan and Baltic States is also proved by other indices and rates, including for example relatively low level of innovativeness (comp. The Global; Competitiveness Report 2016-2017, among others), as well as the level of democracy and civil society.

### 3. Social Capital and Integration Processes

Cooperation (consisting in creation of common economic and foreign policy, security zone or judiciary among others) is the basis of integration processes the goal of which is strengthening mutual relationships and exchange between EU countries. (comp. Mynarzová, M. a Kaňa R., pp. 501-505 among others). This cooperation is more effective if the level of social capital among partners participating in cooperation is higher. Integration processes must include not only integration of market mechanisms existing in individual societies, but also consolidation of institutional architecture (mainly formal institutions). This brings some difficulties because evolution of these institutions proceeded in various countries in different political and economic circumstances. Therefore, the level of both formal and informal institutions, as well as the level of social capital is diversified in Europe. The quality of formal institutions (legal and political institutions) and condition of economy can be indicated as factors determining diverse level of trust and social capital in European countries. These determinants are often significant in subjective feeling of security and stability of the citizens of the European states whereas the qualities that are results of these determinants, including quality of life or optimism among citizens, are often the fundament for creation or complete lack of both the trust as well as social capital (M. Lissowska, 2013, p.191). These reasons explain why Scandinavians are characterised by the highest level of trust and social capital. The most important determinants in these countries include citizen-friendly welfare state, low income inequalities (the level of Gini coefficient measuring inequalities lowest in comparison with other European states), equality (similar chances of men and women in political and economic



life), equal opportunities, low level of corruption, and high level of civil society, measured by participation of citizens in social organisations (compare H. Domański, 2014, [www.wyborcza.pl](http://www.wyborcza.pl)) On the other hand, low social capital in the countries of Central and Eastern Europe results both from historical and cultural determinants as well as economic circumstances. A considerable social cost of transformation processes expressed in pauperisation of large groups of communities and rising wealth of others has not been conducive to development of cooperation and formation of social capital in these countries. The period of economic and political transformation in analysed countries brought destruction of existing institutions. After 1989 formal institutions were implemented rather efficiently, whereas changes in informal institutions were not, and still have not been easy to implement. Attitudes, habits and ways of thinking among citizens acquired in long-lasting socio-political and economic processes were not easy to be adapted to new surrounding political and economic circumstances (A. Grabowska, A. Jakubowska, 2016, s.17). Deep crisis of political debate dominated by political disputes that are additionally fuelled by media may also be one of the reasons for lower level of social trust of the citizens of Central and Eastern Europe, Balkans and Baltic states towards formal institutions. The lack of trust in political sphere is in turn one of the barriers to creation of efficient state that would ensure appropriate institutional infrastructure. Therefore, a thesis can be formulated that the period of transformation did not create institutional infrastructure that would be conducive to formation of social capital in the states that experienced both political and market changes.

#### 4. Conclusion

Emergence of social capital implies a series of external results. The higher the social capital, the more external results can be observed, and the more external results are positive, the more benefits for socio-economic development of a specific community or society can be seen. Europe and integration processes among its members can be indicated here as the example of such a community. Therefore, it can be assumed that there is some feedback between social capital and integration processes. Social capital is a determinant affecting integration processes which also offer a chance for the development and integration of informal and formal institutions in Europe. Thus, integration processes can become an opportunity for growth of social capital in the countries characterised by its low level.

#### References

- [1] Beugelsdijk S.& Van Schaik T., (2005), Social Capital and Growth in European Regions, An Empirical Test, *European Journal of Political Economy*, 21, pp. 301-324.
- [2] Bourdieu P. (1986): *The Forms of Capital* in: *Handbook of Theory and Research for the Sociology of Education*, edited by J.G. Richardson. New York: Greenwood Press.
- [3] Coleman J.S. (1998): *Social Capital in the Creation of Human Capital*, „*American Journal of Sociology*”, no 94, supplement, pp.95-120.
- [4] Czapiński J. (2015): Ekonomiczne znaczenie miłości dalszego bliźniego [*Economic importance of love for more distant neighbour*], in: *Reforma kulturowa 2020-2030-2040. Sukces wymaga zmian [Cultural reform 2020-2030-2040. Success needs changes]*, (red.) J. Żakowski, Report developed on request of Krajowa Izba Gospodarcza [*The Polish Chamber of Commerce*], Kongres Innowacyjnej Gospodarki [*Congress of Innovative Economy*], Warsaw , pp.1-98.
- [5] Domański H., 2014 an interview for *Gazeta Wyborcza*: Scandinavians most trustful and happiest. Poland at the bottom of the ranking of trust, 13<sup>th</sup> May 2014, [www.wyborcza.pl](http://www.wyborcza.pl)., accessed 23<sup>rd</sup> February 2018

- [6] Eucken W. (2005): *Podstawy polityki gospodarczej [Principles of economic policy]*, Publisher: Wydawnictwo Poznańskie, Poznań,
- [7] Eurostat: Subjective well-being and trust items, by country, 2013, [online]. [cit.2018-02-20]. Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Quality\\_of\\_life\\_in\\_Europe\\_-\\_facts\\_and\\_views\\_-\\_governance](http://ec.europa.eu/eurostat/statistics-explained/index.php/Quality_of_life_in_Europe_-_facts_and_views_-_governance)
- [8] Fukuyama F. (2001): *Social Capital, civil society and development*, „Third World Quarterly” ,no 1, pp.7-20.
- [9] Grabowska – Powaga A. (2016), Uwarunkowania kształtowania kapitału społecznego – odniesienia do Polski [*Determinants of shaping of social capital – references to Poland*], (in:) *Ekonomia. Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu [Economics. Scientific papers of Wroclaw University of Economics]* no 449, (ed.) J.Sokołowski, M.Rekas, Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu [*Publisher of Wroclaw University of Economics*], Wrocław, pp.169-176
- [10] Grabowska A., Jakubowska A. (2016): Institutions creating social capital in Poland after 1989- selected aspects, European Association for Evolutionary Political Economy, The 28th Annual Conference Industrialisation, Socio-Economic Transformation and Institutions, Manchester Metropolitan University [online]. [cit.2018-02-15]. Available at: [http://eaepe.org/?page=user\\_account&op=viewAbstract&year=2016&abstract\\_i=827](http://eaepe.org/?page=user_account&op=viewAbstract&year=2016&abstract_i=827)
- [11] Interpersonal trust attitudes [online]. [cit.2018-02-16]. Available at: <https://ourworldindata.org/grapher/self-reported-trust-attitudes?tab=map>
- [12] Knack S., Keefer P., (1997), Does Social Capital Have an Economic Pay off? A Cross Country Investigation, *Quarterly Journal of Economics* 112, pp. 1251-1288.
- [13] Lissowska M., (2013): Zaufanie i kapitał społeczny – uwarunkowania kulturowe, instytucjonalne czy indywidualne? Wnioski z porównań międzynarodowych [*Trust and social capital – cultural, institutional or individual determinants? Conclusions from international comparisons*], in: *Ekonomia [Economics]*, 4(25), Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu [*Publisher of Wroclaw University of Economics in Wroclaw*], Wrocław, pp.179-196
- [14] Matysiak A. (1999): *Źródła kapitału społecznego [Sources of social capital]*, Publisher: AE Wrocław [*Wroclaw University of Economics*], Wrocław,
- [15] Mynarzová, M. a Kaňa R.. Theory and Practice of Industrial Policy of the EU in the Context of Globalization Challenges. In: *Honová, I. et al. (eds.). Proceedings of the 2nd International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, 2014, pp. 499-507. ISBN 978-80-248-3388-0. (WOS: 000346144900056)
- [16] Paxton P., (1999), Is Social Capital Declining in the United States? A Multiple Indicator Assessment, *American Journal of Sociology*, 105, pp. 88-127.
- [17] Pichler F., Wallace C. (2007): Patterns of Formal and Informal Social Capital in Europe, *European Sociological Review*, Volume 23, Number 4, [online]. [cit.2018-02-10]. Available at: [https://www.abdn.ac.uk/socsci/documents/Eur\\_Sociol\\_Rev-2007-Pichler-423-35.pdf](https://www.abdn.ac.uk/socsci/documents/Eur_Sociol_Rev-2007-Pichler-423-35.pdf)
- [18] Putnam R. (1995): *Demokracja w działaniu. Tradycje obywatelskie we współczesnych Włoszech [Democracy in action. Civil traditions in contemporary Italy]*, Publisher: Wydawnictwo Znak , Kraków.

## **Transmission of Interest Rates: EU Leader Versus his Czech Neighbour**

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### **Abstract**

*Interest rate transmission reflects the efficiency of monetary policy. The adequate reaction of commercial banks to changes in the main monetary policy rate is highly important for central bankers. The paper focuses on the interest rate transmission in the Czech Republic and Germany during the period from January 2004 to November 2017. As an analytic tool, I use ARDL and NARDL modelling approach. The results show that in the Czech Republic, the interest rate pass-through is mostly complete for mortgage, SME and corporate lending rates. In Germany, however, I could not confirm any significant long run relationship between the monetary policy rate and commercial bank lending rates. The exception is the interest rate for consumer loans for which I found a weak long-run pass-through. Testing the asymmetry of interest rate pass-through, the results reveal that banks in the Czech Republic react stronger to contractionary monetary policy than expansionary, especially so in case of the mortgage loans' segment.*

**Keywords:** ARDL model, bank lending rates, CNB policy rate, ECB policy rate, NARDL model, transmission of interest rates

**JEL Classification:** E43, E52, C22

### **1. Introduction**

The interest rate channel of monetary policy is highly important channel through which monetary policy leaders affect the credit cycle, inflation and thus the whole economy. Well-functioning transmission process determine the efficiency of monetary policy, particularly in the regime of inflation targeting. The aim of the paper is to examine and compare the interest rate pass-through in the Czech Republic and Germany from January 2004 to November 2017. Moreover, I test the possibilities of an asymmetric pricing behaviour of commercial banks in both economies. For the analysis, I consider four types of lending rates: consumer, mortgage, small and medium enterprises (SME), and corporate lending rates.

To my best knowledge, I am the first one who test possible asymmetries for the interest rate pass-through in the Czech Republic. Other studies focusing on the transmission of interest rates in the Czech Republic such as Horváth and Podpiera (2012), Babecká-Kucharčuková et al. (2013) or Havranek et al. (2016) focus primarily on the symmetric interest rate transmission.

Using the ARDL and NARDL approach, I find substantial asymmetry of interest rates for mortgages and corporate loans in the Czech Republic. On the contrary, German banks does not exhibit such a behaviour. In their case, there exist only minor downward asymmetry for SME lending rates, which is in direct contrast with the Czech baking sector where I confirm a strong upward asymmetry. Moreover, in both economies, lending rates for non-financial sector

react faster and stronger on monetary policy rate changes than household lending rates. Especially interest rates for consumer loans show weak transmission (Germany) or no transmission at all (Czech Republic).

Searching through the empirical literature, I have found that the interest rate pass-through shows signs of heterogeneity across countries and across different loan products. For instance, Égert et al. (2007) detect stronger pass-through in five Central and Eastern European countries than in Germany or Austria. Further, Holton and d'Acri (2015) reveal substantial heterogeneity among euro area banks using the error correction model. Focusing at different loan products, the empirical literature mostly confirm a higher interest rate pass-through for non-financial companies than for household sector (Égert et al. 2007; Belke et al., 2013; Mihaylov, 2016).

During the last decade, with a development of modern econometric methods, the analysis of the interest rate pass-through increasingly focuses on possible non-linearities (asymmetries). Hence, the asymmetric response to monetary policy rate shifts started to be confirmed largely around the world. For instance, Wang and Lee (2009) using TAR and MTAR models reveal asymmetry for several Asian countries such as Hong Kong, Japan, Korea, Indonesia, Malaysia, Thailand, Philippines and Taiwan. Apergis and Cooray (2015) confirm positive asymmetry of lending rates in the UK, US and Australia, or further on, Kleimeier and Sander (2006) find asymmetry in bank pricing behaviour for most of the EMU countries. Considering different loan products, the asymmetry is mostly proofed for mortgages lending rates. To demonstrate, Becker et al. (2012) find a significant asymmetry for mortgage rates in the UK showing that banks react more on monetary policy rate increasing than decreasing. Payne (2006-07) shows the similar results testing the response of fixed mortgages in the US.

## **2. Methodology**

### **2.1 Data**

For the analysis of interest rate pass-through in the Czech Republic and Germany, I distinguish among four categories of interest rates: consumer, mortgages, SME and large corporate loans' rates. While the SME loans are defined as loans to non-financial corporation of up to 1 million EUR, the large corporate loans are defined as loans to non-financial corporation of over 1 million EUR. I use only the time series for new loans. Thus, the interest rates on revolving or outstanding loans are not considered in the analysis. As a source of data served the database of the European Central Bank. The database offers harmonized dataset, which enables me to compare the transmission process between the two countries.

Since the intention is to examine possible asymmetries in the interest rate pass-through, it is important to consider the whole interest rate cycle. The dataset for this paper covers the period from January 2014 to November 2017. For the Czech Republic, the main monetary policy rate has begun to rise in the mid of 2017. Therefore, the interest rate cycle is almost complete. For Germany, however, the policy rate still lies on its zero lower bound (ZLB), which prevents from the completion of the cycle. Figure A1 (in the appendix) displays each category of lending rates against the main monetary policy rate. In addition, table A1 (in the appendix) describes used time series and table A2 (in the appendix) shows descriptive statistics of time series.

### **2.2 Modelling Approach**

For the purpose of estimation, I use the autoregressive distributed lag modelling approach (ARDL) proposed by Pesaran et al. (2001) and its non-linear version the non-linear autoregressive lag modelling approach (NARDL) proposed by Shin et al. (2013). First, to

describe the ARDL model, let's assume an existing long-run cointegration relationship between the main monetary policy rate and a commercial banks' lending rate:

$$br_t = \alpha + \beta mpr_t + \varepsilon_t, \quad (1)$$

where  $br_t$  is commercial bank lending rate,  $\alpha$  shows interest rate spread,  $mpr_t$  is the monetary policy rate, and  $\varepsilon_t$  is the error term. Most importantly, the coefficient  $\beta$  represents the interest rate pass-through. Assuming optimal conditions (perfectly competitive market),  $\beta$  would be equal to one showing complete pass-through. Optimal conditions, however, are rarely met. Therefore, commercial banks may react less than proportionally on the monetary policy shifts and one would talk about incomplete pass-through ( $\beta < 1$ ), or banks may respond more than proportionally on the monetary policy rate changes showing overshooting of the policy rate shifts ( $\beta > 1$ ).

The paper by Pesaran and Shin (1999) shows that the ARDL model exhibits consistency even if the used variables are first order integrated, I(1). Hence, it is possible to estimate the ARDL model using stationary as well as non-stationary time series. Nevertheless, the use of second order integrated time series is not recommended.

The basic ARDL ( $p, q$ ) model can be written as follow:

$$br_t = \delta + \sum_{i=1}^p \mu_i br_{t-i} + \sum_{j=0}^q \psi_j mpr_{t-j} + \varepsilon_t, \quad (2)$$

where symbols  $p$  and  $q$  determine the lag structure of the model. The equation (2) can be further rewritten in the error correction form:

$$\Delta br_t = \sum_{i=1}^{p-1} \mu_i^* \Delta br_{t-i} + \sum_{j=0}^{q-1} \psi_j^* \Delta mpr_{t-j} + \lambda ECT_{t-1} + \varepsilon_t \quad (3)$$

where  $ECT_{t-1}$  is the error correction term defined as:

$$ECT_{t-1} = (br_{t-1} - \alpha - \beta mpr_{t-1}). \quad (4)$$

From the equation (2) – (4), one can define the coefficient of speed of adjustment  $\lambda$ , and the long-run coefficients  $\alpha$  and  $\beta$ :

$$\lambda = -(1 - \sum_{i=1}^p \mu_i), \alpha = \frac{\delta}{(1 - \sum_{i=1}^p \mu_i)}, \beta = \frac{\sum_{j=0}^q \psi_j}{(1 - \sum_{i=1}^p \mu_i)}. \quad (5)$$

If the model is dynamically stable and thus restores to its long-run equilibrium, the coefficient  $\mu_i$  (in absolute term) must be lower than one,  $|\mu_i| < 1$ . In such as circumstances, the long-run relationship between variables exists and it is captured by  $\alpha$  and  $\beta$ . Moreover, the coefficient  $\lambda$  represents the speed of adjustment. Higher  $\lambda$  (in absolute term), assuming  $|\mu_i| < 1$ , means that the model restores faster towards its long-run equilibrium. Coefficients  $\mu^*$  and  $\psi^*$  in the equation (3) capture the short run dynamic effect.

The crucial task, for the ARDL modelling approach, is the appropriate choice of lag-length structure. For this purpose, one can use the Schwarz bayesian criterion (BC) or Akaike information criterion (AIC). Pesaran and Shin (1999) employing Monte Carlo experiments show that BC exhibits slightly better results. Hence, the BC represents the preferred criterion in this paper.

Pesaran et al. (2001) further extended the theoretical approach and proposed bounds testing procedure, which allows to examine the relationship between variables in levels regardless of whether the used variables are I(0), I(1) or mutually cointegrated. Moreover, they provided sets of bounds critical values for bounds testing procedure. The testing procedure compares the estimated F-statistic or Wald statistics with the bounds critical values. When the estimated F-statistic (Wald statistic) lies out of the critical bounds values, one can either confirm or reject the long-run level relationship between variables. In situations, however, when the F-statistic

(Wald statistic) falls into the interval of bounds critical values, the relationship between variables is inconclusive.

Considering the problem of asymmetric behaviour between variables, Shin et al. (2014) developed the Non-linear autoregressive distributed lag modelling approach (NARDL), which is based on the ARDL approach. Therefore, it allows to examine asymmetries in the short-run as well as in the long-run.

To explain NARDL model, I rewrite the basic long-run cointegration relationship from equation (1) into the non-linear form (excluding constant):

$$br_t = \beta^+ mpr_t^+ + \beta^- mpr_t^- + \epsilon_t. \quad (6)$$

One can see that the variable  $mpr_t$  is decomposed as  $mpr_t = mpr_0 + mpr_t^+ + mpr_t^-$ , where  $mpr_t^+$  and  $mpr_t^-$  are describe as a sum of positive and negative changes:  $mpr_t^+ = \sum_{j=1}^t \Delta mpr_j^+$  and  $mpr_t^- = \sum_{j=1}^t \Delta mpr_j^-$ , and  $mpr_0$  represents threshold zero value.

Now, I can define the NARDL( $p, q$ ) model:

$$br_t = \sum_{i=1}^p \mu_i br_{t-i} + \sum_{j=0}^q (\psi_j^+ mpr_{t-j}^+ + \psi_j^- mpr_{t-j}^-) + \epsilon_t. \quad (7)$$

Similarly, as in case of ARDL model, the equation (7) can be rewritten into the error correction form:

$$\Delta br_t = \sum_{i=1}^{p-1} \mu_i^* \Delta br_{t-i} + \sum_{j=0}^{q-1} (\psi_j^{*+} \Delta mpr_{t-j}^+ + \psi_j^{*-} \Delta mpr_{t-j}^-) + \lambda ECT_{t-1} + \epsilon_t, \quad (8)$$

where

$$ECT_{t-1} = (br_{t-1} - \beta^+ mpr_{t-1}^+ - \beta^- mpr_{t-1}^-). \quad (9)$$

Substituting the equation (9) into (8), I obtain following equation:

$$\Delta br_t = \sum_{i=1}^{p-1} \mu_i^* \Delta br_{t-i} + \sum_{j=0}^{q-1} (\psi_j^{*+} \Delta mpr_{t-j}^+ + \psi_j^{*-} \Delta mpr_{t-j}^-) + \lambda (br_{t-1} - \beta^+ mpr_{t-1}^+ - \beta^- mpr_{t-1}^-) + \epsilon_t, \quad (10)$$

where

$$\lambda = -(1 - \sum_{i=1}^p \mu_i), \beta^+ = \frac{\sum_{j=0}^q \psi_j^+}{(1 - \sum_{i=1}^p \mu_i)}, \beta^- = \frac{\sum_{j=0}^q \psi_j^-}{(1 - \sum_{i=1}^p \mu_i)}. \quad (11)$$

Since the NARDL model is linear in all parameters, one can estimate the model using the standard OLS. Shin et al. (2014) also developed the Bounds testing procedure, which allows to test the existence of long-run relationship between variables. The testing procedure is based on t- and F-statistic, where the null for t-statistic is  $\lambda = 0$  against alternative  $\lambda < 0$  (negative coefficient implies restoring of the equilibrium) and the null of F-statistic is:  $\lambda = \psi^+ = \psi^- = 0$ .

### 3. Estimation Results

In this section, I show the results of estimation for the ARDL as well as for the NARDL approach. First, the linear model for the Czech Republic (Table 1) reveals that between consumer lending rate and monetary policy rate is no evident long-run co-integration relationship. Thus, consumer lending rates react on different factors than monetary policy stance. Further, mortgage rates show signs of over-adjustment in the long run. It indicates that mortgage market strongly responds on monetary policy rate changes with tendencies of overshooting the movements in policy rate. In addition, I detect complete interest rate pass-through for SME lending rates and nearly complete for corporate lending rates. According to the ARDL bounds test, however, I cannot confirm a long-run relationship between corporate

rates and the monetary policy rate. The estimated critical values of the bounds test fall into inconclusive region. Hence, it need further co-integration tests for the verification of results.

In the short run, the interest rate pass-through is much weaker. While the lending rates for household sector react in very limited extend, the lending rates for non-financial companies show three times larger pass-through. Nevertheless, even for the non-financial sector, the size of the pass-through is still limited. The speed of adjustment suggests that interest rates for households' loans respond notably less on the shock from the long-term equilibrium than interest rates on loans for non-financial companies.

**Table 1: Results of the Linear Model for the Czech Republic**

	Consumer Lending Rate	Mortgage Lending Rate	SME Lending Rate	Corporate Lending Rate
<i>Long-run Relationship</i>				
MPR	5.1909 (14.7281)	1.2005*** (0.2105)	0.9294* (0.0783)	0.8368*** (0.0953)
C	1.2025 (34.3256)	2.1333*** (0.4066)	2.6801 (0.1101)	1.8382*** (0.1578)
Speed of Adj.	-0.0060 (0.0187)	-0.0257*** (0.0072)	-0.1362** (0.0380)	-0.1457*** (0.0462)
<i>Short-run Dynamics</i>				
Lending rate (-1)		0.2674*** (0.0740)	-0.3042* (0.0690)	-0.3290*** (0.0689)
MPR	0.0313 (0.0237)	0.0309*** (0.0072)	0.1266** (0.0331)	0.1219*** (0.0366)
C	0.0072 (0.2458)	0.0549** (0.0238)	0.3652 (0.1110)	0.2678*** (0.0924)
Num. Of obs.	166	165	165	165
ARDL Bounds Test	1.1437 [3.74-4.30]	7.9372 [3.62-4.16]	5.0690 [3.62-4.16]	3.7125 [3.62-4.16]
Covariance Matrix	HAC		WHITE	
Lag Structure	ARDL (1, 0)	ARDL (2, 0)	ARDL (2, 0)	ARDL (2, 1)

**Notes:** \*\*\*, \*\*, \* shows statistical significance at the 1%, 5%, and 10%. Terms in parentheses show standard errors and values in brackets are critical values for the ARDL Bound test.

Source: Author's calculations

In case of Germany (Table 2), the long run co-integration relationship could be confirm only for consumer lending rates. The strength of the pass-through, however, reaches only to 0.18, which suggests a weak and incomplete transmission. For mortgage, SME and corporate lending rates, the ARDL bounds test fails to reject the null hypothesis of non-existing long run co-integration relationship. Therefore, the discussion of the results for those lending rates is irrelevant.

**Table 2: Results of the Linear Model for Germany**

	Consumer Lending Rate	Mortgage Lending Rate	SME Lending Rate	Corporate Lending Rate
<i>Long-run Relationship</i>				
MPR	0.1805*** (0.0570)	0.9546*** (0.1935)	0.8791*** (0.0388)	1.0129*** (0.0574)
C	6.2877*** (0.1426)	1.7802*** (0.4621)	2.5958*** (0.0739)	1.3822*** (0.1250)
Speed of Adj.	-0.1829*** (0.0454)	-0.0214** (0.0107)	-0.1281*** (0.0431)	-0.1068** (0.0510)
<i>Short-run Dynamics</i>				
MPR	0.0330* (0.0169)	0.0204** (0.0098)	0.1126*** (0.0388)	0.1082** (0.0500)
C	1.1500*** (0.2903)	0.0381 (0.0263)	0.3325*** (0.1125)	0.1477* (0.0775)
Num. Of obs.	166	165	163	163
ARDL Bounds Test	5.5262 [3.74-4.30]	2.3721 [3.62-4.16]	3.0416 [3.62-4.16]	1.7007 [3.62-4.16]
Covariance Matrix	HAC	HAC	HAC	HAC
Lag Structure	ARDL (1, 0)	ARDL (2, 2)	ARDL (4, 3)	ARDL (3, 4)

**Notes:** \*\*\*, \*\*, \* shows statistical significance at the 1%, 5%, and 10%. Terms in parentheses show standard errors and values in brackets are critical values for the ARDL Bound test.

Source: Author's calculations

Using the NARDL approach, I confirm substantial asymmetry for the transmission of interest rates for mortgages, SME and corporate loans in the Czech Republic (Table 3). While the mortgage and corporate lending rates are asymmetric upward, the SME lending rate shows the opposite behaviour. Therefore, considering mortgage and corporate loan segment, commercial banks react more sensitively on monetary policy tightening than easing. For the consumer lending rates, however, the NARDL bounds test again rejects the long-run co-integration relationship. Thus, it confirms results of the linear ARDL model. Apparently, monetary policy rate changes do not affect the consumer lending rates.

The short run pass-through copies the results of the long run pass through but at much lower level. The strongest reaction exhibits corporate lending rates. Similarly, the speed of adjustment confirms that corporate lending rates respond faster on the shock from the long-run equilibrium than others lending rates.

The results of the non-linear model for Germany show a complete interest rate pass-through for corporate lending rates without any sign of asymmetry (Table 4). Thus, commercial banks completely react on the monetary policy rate shift regardless of the direction of a shift. For the SME lending rates, the model reveals a minor downward asymmetry. More precisely, there is a stronger response on decreasing of the monetary policy rate than on increasing. The NARDL bounds test shows inconclusive results for the long-run co-integration relationship between monetary policy rate and mortgage lending rate. Therefore, this result needs to be further examined in future research by other co-integration techniques. For the consumer lending rates, I find a significant asymmetry. Apparently, considering consumer rates, German commercial banks react on monetary policy easing but not on tightening, which demonstrates an upward inelasticity.



**Table 3: Results of the Non-Linear Model for the Czech Republic**

	Consumer Lending Rate	Mortgage Lending Rate	SME Lending Rate	Corporate Lending Rate
<i>Long-run Relationship</i>				
MPR+	15.9895 (57.9152)	2.3275*** (0.6534)	0.7530*** (0.1851)	1.2591*** (0.1203)
MPR-	8.6761 (30.1659)	1.3580*** (0.2704)	0.8344*** (0.0885)	0.9459*** (0.0675)
C	-1.4665 (57.6140)	1.8487 (1.1830)	4.5449*** (0.2461)	3.0102*** (0.1232)
Speed of Adj.	-0.0051 (0.0187)	-0.0216*** (0.0071)	-0.1496*** (0.0355)	-0.2576*** (0.0563)
<i>Short-run Dynamics</i>				
MPR+	0.0823 (0.0579)	0.0503*** (0.0122)	0.1127*** (0.0411)	0.3243*** (0.0718)
MPR-	0.0447 (0.0275)	0.0293*** (0.0079)	0.1249*** (0.0330)	0.2437*** (0.0487)
C	-0.0075 (0.2633)	0.0400 (0.0364)	0.6801*** (0.1669)	0.7754*** (0.1649)
Num. Of obs.	166	164	165	165
NARDL Bounds Test	1.0913 [3.24-4.05]	14.5020 [3.1-3.87]	5.9485 [3.1-3.87]	7.1206 [3.1-3.87]
Covariance Matrix	HAC	WHITE		WHITE
Lag Structure	NARDL (1,0,0)	NARDL (1,2,0)	NARDL (2,1,0)	NARDL (2, 0, 1)

**Notes:** \*\*\*, \*\*, \* shows statistical significance at the 1%, 5%, and 10%. Terms in parentheses show standard errors and values in brackets are critical values for the ARDL Bound test.

Source: Author's calculations

**Table 4: Results of the Non-Linear Model for Germany**

	Consumer Lending Rate	Mortgage Lending Rate	SME Lending Rate	Corporate Lending Rate
<i>Long-run Relationship</i>				
MPR+	0.1203 (0.1185)	0.4300* (0.2542)	0.8248*** (0.0604)	1.0330*** (0.0898)
MPR-	0.1637*** (0.0608)	0.7794*** (0.1335)	0.8942*** (0.0329)	1.0403*** (0.0526)
C	6.7278*** (0.1737)	4.4877*** (0.2908)	4.5669*** (0.0771)	3.5352*** (0.1117)
Speed of Adj.	-0.1851*** (0.0460)	-0.0397*** (0.0116)	-0.1897*** (0.0421)	-0.1852*** (0.0479)
<i>Short-run Dynamics</i>				
MPR+	0.0223 (0.0364)	0.0171** (0.0112)	0.1565*** (0.0351)	0.1913*** (0.0485)
MPR-	0.0303 (0.0188)	0.0310*** (0.0098)	0.1696*** (0.0360)	0.1927*** (0.0458)
C	1.2451*** (0.3176)	0.1782* (0.0531)	0.8664*** (0.1884)	0.6548*** (0.1637)
Num. Of obs.	166	165	163	163
NARDL Bounds Test	4.1499 [3.1-3.87]	3.8666 [3.1-3.87]	6.8852 [3.1-3.87]	5.8536 [3.1-3.87]
Covariance Matrix	HAC	HAC	HAC	HAC
Lag Structure	NARDL (1,0,0)	NARDL (2,0,0)	NARDL (4,0,2)	NARDL (4,0,2)

**Notes:** \*\*\*, \*\*, \* shows statistical significance at the 1%, 5%, and 10%. Terms in parentheses show standard errors and values in brackets are critical values for the ARDL Bound test.

Source: Author's calculations

In the short run, I could not confirm any significant asymmetric behaviour. As in case of Czech Republic, the corporate lending rates react stronger in compare to others lending rates. The estimates of speed of adjustment, however, shows that all lending rates respond equally fast regardless of the loan segment. The exception is the mortgage lending rate. Nevertheless, I note that for this lending rate, the NARDL bounds test reveal an inconclusive long-run co-integration relationship.

#### **4. Conclusion**

This paper examined the interest rate transmission from the monetary policy rate to consumer, mortgage, SME, and corporate lending rate in the Czech Republic and Germany from January 2004 to November 2017. Moreover, I tested the asymmetric behaviour of commercial banks in reaction on monetary policy rate shifts.

Using the ARDL and NARDL model, I find mostly complete interest rate pass-through for Czech loan products. The exceptions are consumer lending rates, which do not show any long-run co-integration relationship with the monetary policy rate. Therefore, commercial banks in the Czech Republic set their consumer lending rates according to different criterions than monetary policy stance. Considering the asymmetric behaviour, the results show significant upward asymmetry in the Czech Republic for mortgage and corporate lending rates. Those loans segments represent the major part of all loans (aprox. 75 % of loans). Thus, more than proportional increase of those lending rates, as I confirm by the NARDL model, promises higher returns for commercial banks. As a result, the Czech National Bank should be careful with the contractionary monetary policy knowing about the stronger reaction of commercial banks. More conservative policy stance towards the rising of interest rates, as it is now in Czechia, might be the optimal concept.

The situation differs in Germany. The interest rate pass-through seems to be complete and symmetric for corporate lending rates. Therefore, German banks react in the same manner on monetary policy tightening as well as on easing. SME lending rates respond almost the same but less completely and with mild tendency to downward asymmetry. Interestingly, commercial banks in Germany does not show any signs of stronger reaction on monetary policy tightening in any loan segment, which is in contrast to the behaviour of Czech banks. On the contrary, considering consumer loans, German banks respond only on monetary policy easing, cutting their consumer lending rates with the fall of policy rate.

Overall, the size of the pass-through is comparable for both economies. For the Czech Republic, however, there are evidences of a substantial upward asymmetry of the pass-through. In contrast, the interest rate pass-through in Germany seems to be predominantly symmetric or, in some cases, mildly downward asymmetric.

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## References

- [1] Apergis, N. and Cooray A. (2015). Asymmetric interest rate pass-through in the U.S., the U.K. and Australia: New evidence from selected individual banks. *Journal of Macroeconomics*, vol. 45, pp. 155–172.
- [2] Babecká-Kucharčuková, O., Franta M., Hájková D., Král P., Kubicová I., Podpiera A. and Saxa B. (2013). What We Know About Monetary Transmission in the Czech Republic: Collection of Empirical Results. *CNB Research and Policy Notes*, No. 1/2013. [online]. [cit.2018-03-09]. Available at: [https://www.cnb.cz/miranda2/export/sites/www.cnb.cz/en/research/research\\_publications/irpn/download/rpn\\_1\\_2013.pdf](https://www.cnb.cz/miranda2/export/sites/www.cnb.cz/en/research/research_publications/irpn/download/rpn_1_2013.pdf)
- [3] Becker, R., Osborn D. R. and Yildirim D. (2012). A threshold cointegration analysis of interest rate pass-through to UK mortgage rates. *Economic Modelling*, vol. 29, pp. 2504–2513.
- [4] Belke, A., Beckmann J. and Verheyen, F. (2013). Interest rate pass-through in the EMU – New evidence from nonlinear cointegration techniques for fully harmonized data. *Journal of International Money and Finance*, vol. 37, pp. 1–24.
- [5] Égert, B., Crespo-Cuaresma J. and Reininger T. (2007). Interest rate pass-through in central and Eastern Europe: Reborn from ashes merely to pass away? *Journal of Policy Modeling*, vol. 29, pp. 209–225.
- [6] Havranek, T., Irsova Z. and Lesanovska J. (2016). Bank efficiency and interest rate pass-through: Evidence from Czech loan products. *Economic Modelling*, vol. 54, pp. 153–169.
- [7] Horváth, R. and Podpiera A. (2012). Heterogeneity in bank pricing policies: The Czech evidence. *Economic Systems*, vol. 36, pp. 87–108.
- [8] Kleimeier, S. and Sander H. (2006). Expected versus unexpected monetary policy impulses and interest rate pass-through in euro-zone retail banking markets. *Journal of Banking & Finance*, vol. 30, pp. 1839–1870.
- [9] Mihaylov, M. (2016). Determinants of loan interest rates in a country with a currency board: Evidence from Bulgaria. *Economic Systems*, vol. 40, pp. 355–372.
- [10] Payne, J. E. (2006-2007). More on the Monetary Transmission Mechanism: Mortgage Rates and the Federal Funds Rate. *Journal of Post Keynesian Economics*, vol. 29, No. 2, pp. 247-257.
- [11] Pesaran, M. H. and Shin Y. (1999). An Autoregressive Distributed Lag Modelling Approach to Cointegration Analysis. *Econometrics and Economic Theory in the 20th Century: The Ragner Frisch Centennial Symposium*. Cambridge, Cambridge University Press.
- [12] Pesaran, M. H., Shin Y. and Smith R. J. (2001). Bounds Testing Approaches to the Analysis of Level Relationships. *Journal of Applied Econometrics*, vol. 16, pp. 289-326.
- [13] Shin, Y., Yu B. and Greenwood-Nimmo, M. (2014). Modelling Asymmetric Cointegration and Dynamic Multipliers in a Nonlinear ARDL Framework. In: Sickles, R. (et al.) (Eds.). *Festschrift in Honor of Peter Schmidt*. Springer, pp 281-314.

- [14] Wang, K.-M. and Lee Y.-M. (2009). Market volatility and retail interest rate pass-through. *Economic Modelling*, vol. 26, pp. 1270–1282.

## Appendix

**Table A1 - Time Series and Their Sources**

	Variable	Data source
<i>Dependent Variables</i>		
Consumer lending rate (CZ)	<i>LRCONS_CZ</i>	ECB – MIR DATABASE
Mortgage lending rate (CZ)	<i>LRMORT_CZ</i>	ECB – MIR DATABASE
Small corporate loans lending rate (CZ)	<i>LRSME_CZ</i>	ECB – MIR DATABASE
Large corporate loans lending rate (CZ)	<i>LRCORP_CZ</i>	ECB – MIR DATABASE
Consumer lending rate (DE)	<i>LRCONS_DE</i>	ECB – MIR DATABASE
Mortgage lending rate (DE)	<i>LRMORT_DE</i>	ECB – MIR DATABASE
Small corporate loans lending rate (DE)	<i>LRSME_DE</i>	ECB – MIR DATABASE
Large corporate loans lending rate (DE)	<i>LRCORP_DE</i>	ECB – MIR DATABASE
<i>Explanatory Variables</i>		
2-week Repurchase rate (CNB)	<i>MPR_CNB</i>	ECB – MIR DATABASE
2-week Repurchase rate (ECB)	<i>MPR_ECB</i>	ECB – MIR DATABASE

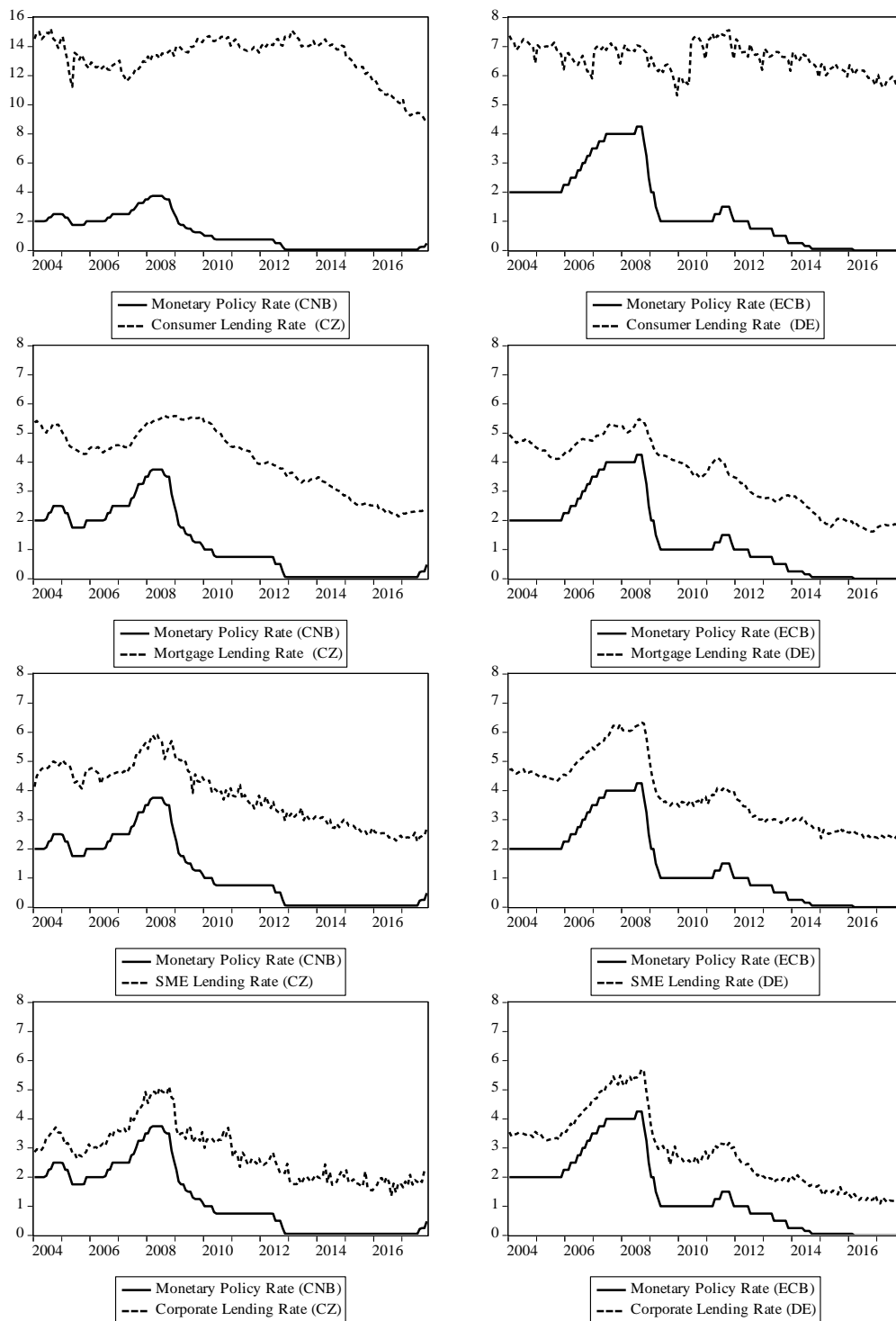
Source: European Central Bank (2017)

**Table A2 – Descriptive Statistics**

	Mean	Median	Maximum	Minimum	Observations
Monetary Policy rate (CZ)	1.20	0.75	3.75	0.05	167
Consumer Lending Rate (CZ)	13.17	13.70	15.23	8.73	167
Mortgage Lending rate (CZ)	4.09	4.41	5.60	2.13	167
SME Lending rate (CZ)	3.86	3.90	5.91	2.25	167
Corporate Lending rate (CZ)	2.83	2.77	5.11	1.35	167
Monetary Policy rate (DE)	1.41	1.00	4.25	0.00	167
Consumer Lending Rate (DE)	6.59	6.68	7.57	5.32	167
Mortgage Lending rate (DE)	3.55	3.80	5.48	1.62	167
SME Lending rate (DE)	3.87	3.62	6.33	2.34	167
Corporate Lending rate (DE)	2.87	2.72	5.70	1.09	167

Source: European Central Bank (2017)

**Figure A1 – Individual Lending Rates against the Repo Rate**



Source: European Central Bank (2017)

## **Awarding Damages for Health Impairment in Recent Case Law of the Court of Justice of the EU**

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### **Abstract**

*In 2017 the Court of Justice of the EU offered a new approach to assessing the concept of compensation of damages to human health due to a defective vaccine. In its judgment *N.W. and others v. Sanofi Pasteur MSD and others*, the Court of Justice of the EU relaxed the requirements for proving the causal relationship between the defective product and the onset of harm. The objective of the paper is to discuss the possible implications of the said judgment with respect to the compensation of damages likely to have been caused by vaccination in different jurisdictions within the European Union. Whereas the analyzed case-law refers to a purely internal situation (all the relevant facts of the case occurred in France), consumers in other EU Member States may face cross-border situations when claiming damages for a defective vaccine produced in another EU Member State.*

**Keywords:** *causal relationship, compensation of damages, court of justice of the EU, sanofi pasteur, vaccination*

**JEL Classification:** *I18, K32, K41*

### **1. Introduction**

In 2015 the Court of Justice of the European Union was called upon by the French *Cour de Cassation* (Judgment of the Court of Justice, 20 November 2014) to decide on a preliminary reference concerning the evidence plaintiffs have to show in order to obtain compensation of damages caused by a defective product. In this particular case the defective product was a French vaccine administered to a French citizen who is likely to have died as a result of this inoculation. Even though, making a preliminary reference to the Court of Justice of the European Union may have a political context (Mayoral, 2017), its general objective is to establish a dialogue between the national courts and EU judges to protect, *i.a.* the fundamental rights and freedoms of EU citizens (Fan, 2017).

The liability of the manufacturer for a defective product has been governed at EU level by the Council Directive 85/374/EEC of 25 July 1985 **on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products**. It is inherent in the nature of a directive not to unify the legislation of the EU Member States, but rather to harmonize some rules which will contribute to a smooth functioning of the internal market (van Dam, 2013). On the other hand, the said Directive shall also be applied in purely domestic situations having no cross-border elements, *i.e.* also in case of a French product causing harm to a French citizen within the French territory. To trigger the application of the national rules transposing the said EU directive no cross-border element has to be present. Such a purely domestic situation occurred in the judgment to be analyzed.

A French consumer (and his heirs following the death of the consumer) were seeking damages caused by a hepatitis B vaccine against the vaccine's manufacturer, the Sanofi Pasteur corporation.

The aim of this paper is to discuss the possible impact of this judgment on compensating "vaccination victims" within the European Union. The paper will set out to compare the legal reasoning of the Advocate General, Michal Bobek, in charge of drafting the opinion in the case to the verdict of the Court of Justice. Subsequently, it will elaborate on the manner in which consumer have to seek compensation of damages in similar situation in cross border cases where no domestic vaccines are being administered. In the Czech Republic, for instance, no Czech vaccines are being produced, hence only imported vaccines are being employed, in particular those made by the British GSK or the French Sanofi Pasteur, which was the defendant in the underlying dispute before the French courts. The impact of this judgment in the Czech Republic can be rather interesting, since the compensation of damages caused by defective vaccines has not been regulated by any act or infra-legal provisions (such as a government or a ministerial decree) having a binding nature. Prchal has also pointed out at the largely unregulated nature of awarding damages resulting from the performance of health care in a number of jurisdictions (Prchal, 2012).

## 2. The Opinion of the Advocate General

Within the highest instance of the EU's judicial body Advocates General provide an independent assessment of the case before the court chamber delivers its judgment. The opinion of the Advocate General is not binding on the chamber, however, as a rule, justices tend to follow the reasoning proposed by the Advocate General. In his opinion delivered on 7 March 2017, Advocate General Michal Bobek first briefly summarized the facts of the case and analyzed the relevant legal regulation at EU level and in France. The longest discussion of the opinion deals with the legal qualification of the case and concludes with proposing a verdict to be delivered by the chamber of the Court of Justice composed of five justices.

The facts of the case can be briefly summarized as follows. In 1998 and 1999 a French citizen, Mr. J.W. was repeatedly vaccinated against type B Hepatitis. In the aftermath of the vaccination his health started to deteriorate dramatically despite his previous excellent health condition. In 2000 Mr. J. W. was diagnosed with multiple sclerosis of which he died in 2011. No medical history or that of his family suggested that J.W. is likely to develop multiple sclerosis. Hence, the sequence between the vaccination and the onset of the disease proved most likely. Under the French Civil Code the plaintiff has to prove the existence of a damage, the defect and a causal link between the two. This is the standard legal formula for claiming damages. The highest French court, however, believed that in case of extra-contractual liability of pharmaceutical companies for the vaccines they have manufactured the causal link can also be inferred from a set of serious, precise and identical presumptions (Opinion of the Advocate General Michal Bobek, 7 March 2017). Based on the case law of the highest French court it is basically possible for a court to conclude that "the short period between the injection of the hepatitis B vaccine and the appearance of the first symptoms of multiple sclerosis, in conjunction with the lack of any personal or family antecedents of that disease, constitute such serious, specific and consistent presumptions" (*Ibidem*). With respect to the existing French case law, the French *Cour de Cassation* has asked the Court of Justice of the European Union if an interpretation of the causal link based on a set of indirect evidence unfounded by prevailing scientific knowledge is compatible with the objectives of Directive 85/374/EEC.

The said Directive does not provide for a complex regulation of how national courts should deal with the burden of proof. Article 4 of the Directive requires the harmed party to prove the damage, the defect and the causal link between the two. The Directive, however, does not elaborate on whether the causal link must rely on scientific studies. Nor does it mention, whether such scientific studies should follow the mainstream view or whether minority scientific opinions suffice. The Directive is silent about a possible requirement of proving the causal link by means of direct scientific evidence. Hence, national courts have a lot of room for maneuver when assessing the evidence produced. This is typical, in general, of procedural rules which are left almost unregulated at EU level. Despite the national procedural autonomy (Zavadilová, 2016), national courts should keep in mind the principles of equivalence and effectiveness of EU law when adopting their decisions (Bobek *et al.*, 2011). The Advocate General uses teleological interpretation of law when stating that the aim of Directive 85/374/EEC is to protect the consumers. If courts interpret the Directive at variance with this objective, obtaining consumer protection would be impossible in practice (Opinion of the Advocate General Michal Bobek, 7 March 2017).

The Advocate General is in favor of recognizing indirect evidence as a causal link in case of missing scientific studies proving a causal link between the administration of a vaccine and the development of multiple sclerosis, in particular in view of a significant information asymmetry between the consumer and the pharmaceutical corporation (*Ibidem*).

### 3. Legal Arguments and the Verdict of the Court

The chamber in charge of deciding about the preliminary reference largely follows the legal reasoning proposed by the Advocate General when citing the applicable French and EU legislation and summarizing the facts of the case. Apart from the case law mentioned by the Advocate General, the justices refer to an earlier judgment of the Court of Justice in case C-310/13 *Novo Nordiska Pharma* (Judgment of the Court of Justice, 20 November 2014).

The court recalls that the directive fails to define the term of causal link. Its Article 6 defines the concept of a “defective product”. Making reference to its previous judgment in case C-503/13 *Boston Scientific Medizintechnik* (Judgment of the Court of Justice, 5 March 2015) the court observes that “As is apparent from Article 6(1) of that directive, a product is defective when it does not provide the safety which a person is entitled to expect, taking all the circumstances into account, including the presentation of the product, the use to which it could reasonably be expected that it would be put and the time when the product was put into circulation. Moreover, according to the sixth recital of that directive, that assessment must be carried out having regard to the reasonable expectations of the public at large” (Judgment of the Court of Justice, 20 November 2014).

The Court of Justice held that “national courts must first ensure that the evidence adduced is sufficiently serious, specific and consistent to warrant the conclusion that, notwithstanding the evidence produced and the arguments put forward by the producer, a defect in the product appears to be the most plausible explanation for the occurrence of the damage, with the result that the defect and the causal link may reasonably be considered to be established” (*Ibidem*).

Based on the above arguments, the Court of Justice concluded that the legal regime of Directive 85/347/EEC does not preclude the French judicial practice to award damages to a harmed consumer (or to its heirs) based on indirect evidence proving the causal link the administration of the vaccine and the suffered harmed, if the evidence produced is sufficiently compelling. Such an assessment, however, shall be based on a case by case basis, and it is not possible to proceed on the basis of some general presumptions. The Court of Justice of the EU



says that a national “court ruling on the merits of an action involving the liability of the producer of a vaccine due to an alleged defect in that vaccine, in the exercise of its exclusive jurisdiction to appraise the facts, may consider that, notwithstanding the finding that medical research neither establishes nor rules out the existence of a link between the administering of the vaccine and the occurrence of the victim’s disease, certain factual evidence relied on by the applicant constitutes serious, specific and consistent evidence enabling it to conclude that there is a defect in the vaccine and that there is a causal link between that defect and that disease“ (*Ibidem*). In protecting the consumer in case of scientific uncertainty the Court of Justice of the EU has adopted the precautionary principle without mentioning this explicitly (Tapinos, 2015).

#### **4. Reception of the Judgment by Legal Writing**

Given the recent date of the delivery of the judgment, the number of analyses thereof available in legal writing is rather low. Shorter analysis published online do not discuss the judgment at great length. A French lawyer with an academic background, Jean-Sébastien Borghetti, commented the judgement for the Nature journal. He believes it is not at all clear how French courts will handle the judgment of the Court of Justice. He is convinced that the impact of the judgment is likely to be different in different EU Member States based on their current judicial practice of (not) awarding damages to “vaccination victims“. Borghetti argues that the said judgment will simplify the recovery of damages in states such as France, Spain and Italy, however, other states such as Germany and the United Kingdom are unlikely to relax their demanding requirements for achieving compensation of damages caused by defective vaccines. The French professor perceives that the most “dangerous” aspect of the judgment consists in debilitating the public’s trust in the safety of vaccines (Castells and Butler, 2017).

In line with the prediction made by Borghetti on the impact of the judgment of the German judiciary, a German attorney, Boris Handorn, summarizes the case by saying that the assessment of evidence remains in the domain of the EU Member States (Handorn, 2017). This may be interpreted as zero impact of the judgment on the German judicial practice. The Court of Justice does not order national courts to proceed to the assessment of evidence with the same care as French courts do. Handorn stresses that national judges shall continue to exercise their discretionary powers when it comes to the assessment of the produced evidence (*Ibidem*).

Given the high number of American vaccines administered in the European Union, the judgment also arose interest with American attorneys. These emphasize the lowering of standards to prove the causal link in cases of manufacturer’s liability for damages to consumers’ health. They also stress that indirect evidence may not only serve as an evidence of the causal link between the product and the harm, but it may also prove the defective nature of a vaccine (van Bael and Bellis, 2017).

#### **5. Possible Impact of the Judgment on Consumers in the Czech Republic**

The analyzed judgment of the Court of Justice of the EU concerned a purely domestic situation, as outlined above. A French consumer (and his heirs) claimed damages for the impairment of health against a French corporation. In a number of Member States of the EU no domestic vaccines are administered. This is also the case of the Czech Republic, which imports about 50 types of French vaccines made by Sanofi Pasteur (Czech Society for Vaccination, 2017). A harmed consumer will thus have to face a cross-border situation. He or she will have to determine the competent court to decide on the case. Should it be the Czech court or the French court in case of a French vaccine? Under Brussels I Regulation recast (European Union, 2012)

the plaintiff may lodge an action before a domestic court based on the place where the damage occurred. However, if a domestic court delivers a judgment (Czech courts cannot be expected to award damages under the same favorable conditions as French courts do), the consumer would have to seek the recognition and the execution of the judgment in France. Since a Czech court is unlikely to award any damages for a defective vaccine, the Czech consumer would be better placed to select the jurisdiction of the court based in the domicile of the defendant (in case of French vaccines it would be a French court), where covering the fees of an attorney might be well worth it in case of successful litigation, as damages awarded by French courts to “vaccination victims” are rather high. For instance, the *Science et Avenir* journal reports that in 2014 the French state compensated a former nurse the amount of 2.4 million EUR as a result of having developed multiple sclerosis following the administration of the type B hepatitis vaccine which she received in 1991 (Jaliniere, 2017).

A judgment delivered by a national court within the EU can be recognized in another EU Member State almost automatically under Brussels I Regulation recast, however, the legal standing of a consumer would be much less favorable, if the manufacturer of the vaccine was established in the United States, where no EU legislation can be enforced. The Czech Republic imports American vaccines against encephalitis made by Baxter. As no bilateral agreement on mutual recognition of judgments is in place between the Czech Republic and the United States of America, an American court may not recognize a Czech judgment, since in the United States vaccine manufactures are exempted from judicial proceedings and damages are awarded by means of an out-of-court procedure. American courts would definitely require clear and sound scientific evidence proving that there is a causal link between the administration of a vaccine and a harm to the consumer’s health. In this respect, American courts could also apply the public order exception for not recognizing a Czech judgment. With respect to the above, the author believes that the real impact of the analyzed judgment of the Court of Justice of the EU on the recovery of damages caused by defective vaccines in the Czech Republic is likely to be insignificant. It should also be stressed that Czech courts are not used to applying case law directly, which is the case of common law judges, unless their decision can be backed by a clear wording of written legislation.

## 6. Conclusion

In its judgment in case *J.W. v. Sanofi Pasteur and others* the Court of Justice of the EU has accepted the possibility of proving the casual link between a defective vaccine and a damage to human health on the basis of indirect evidence. On the other hand, it stressed that indirect evidence must be assessed on a case by case basis and national courts may not use a set of indirect proofs as a general presumption of having complied with the burden of proof in proceedings on compensation of damages to human health. The examined impact of the said judgment on the recovery of damages is likely to be insignificant, due to the fact the national judges continue to exercise their discretion of free assessment of evidence. The author believes that the analyzed judgment will further help vaccination victims in Member States which are already more inclined to compensate vaccine related damages. It is probably not going to improve the standing of consumer in those EU Member States where the recovery of damages due to a defective vaccine is virtually impossible. It is also essential to keep in mind that the examined judgment referred to a purely domestic situation. Should a cross-border situation occur, the recovery of damages caused to human health due to the administration of a defective vaccine will become procedurally more difficult.

## References

- [1] Bobek, M.; Bříza, P.; Komárek, J. (2011). *Vnitrostátní aplikace práva Evropské unie*. Praha: C.H. Beck.
- [2] Castells, L.; Butler, D. (2017). *Vaccine ruling from Europe's highest court isn't as crazy as scientists think* [online]. [cit. 2018-2-14]. Available at: <https://www.nature.com/news/vaccine-ruling-from-europe-s-highest-court-isn-t-as-crazy-as-scientists-think-1.22222>
- [3] Czech Society for Vaccination, 2017. Official web site [online]. [cit. 2017-11-10]. Available at: <http://www.vakcinace.eu/prehled-dostupnych-vakcin>
- [4] European Union (2012). European Parliament and Council Regulation (EU) No. 1215/2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters. OJ L 351, 20.12.2012, p. 1.
- [5] Fan, B.J. (2017) The judicial dialogue between the Luxembourg and National Courts in the European framework of multilevel protection of fundamental rights. *International Journal of Human Rights and Constitutional Studies*, vol. 4, iss., pp. 95-128.
- [6] Handorn, B. (2017). Beweiswürdigung bleibt Sache der Mitgliedstaaten, *Legal Tribune Online*, [online]. [cit. 2018-2-14]. Available at: <https://www.lto.de/recht/hintergruende/h/eugh-urteil-c62115-tod-nach-impfung-beweiswuerdigung-nationale-gerichte-haftung-pharma-konzern>
- [7] Jalinier, H. (2017) Vaccin contre l'hépatite B et sclérose en plaques: une étrange décision de justice. *Science et Avenir* [online]. [cit. 2018-2-14]. Available at: [https://www.sciencesetavenir.fr/sante/vaccin-contre-l-hepatite-b-et-sclerose-en-plaques-la-cour-de-justice-de-l-ue-reconnait-un-lien-de-causalite\\_114219](https://www.sciencesetavenir.fr/sante/vaccin-contre-l-hepatite-b-et-sclerose-en-plaques-la-cour-de-justice-de-l-ue-reconnait-un-lien-de-causalite_114219)
- [8] Judgment of the Court of Justice, 20 November 2014. Novo Nordiska Pharma. Case C-310/13 [online]. [cit.2018-03-01]. Available at: <http://curia.europa.eu/juris/liste.jsf?language=en&jur=C,T,F&num=C-310/13&td=ALL>
- [9] Judgment of the Court of Justice, 5 March 2015. Boston Scientific Medizintechnik. Case C-503/13 [online]. [cit.2018-03-01]. Available at: <http://curia.europa.eu/juris/liste.jsf?language=en&jur=C,T,F&num=C-503/13&td=ALL>
- [10] Judgment of the Court of Justice, 21 June 2017. N.W. and others v. Sanofi Pasteur MSD and others. Case C-621/15 [online]. [cit.2018-03-01]. Available at: <http://curia.europa.eu/juris/liste.jsf?language=en&jur=C,T,F&num=C-621/15&td=ALL>
- [11] Mayoral, J.A. (2017). In the CJEU Judges We Trust: A New Approach in the Judicial Construction of Europe. *Journal of Common Market Studies*, vol. 55, iss. 3, pp. 551-568.
- [12] Opinion of the Advocate General Michal Bobek, 7 March 2017. N.W. and others v. Sanofi Pasteur MSD and others. Case C-621/15 [online]. [cit.2018-03-01]. Available at: <http://curia.europa.eu/juris/liste.jsf?language=en&jur=C,T,F&num=C-621/15&td=ALL>

- [13] Prchal, P. (2012) Damages Resulting from the Performance of Health Care. In Hamulak, O.; Madlenakova, L. *Limity práva. International Conference on the Limits of Law*. Palacký University. Faculty of Law, Olomouc, pp. 238-244.
- [14] Tapinos, D. (2015) For a pragmatic approach to the precautionary principle serving the victims of personal injury: The case of victims of vaccine against hepatitis B. *Medicine et Droit*, vol. 2015, iss. 134, pp. 105-114.
- [15] Van Bael and Bellis (2017). *ECJ Lowers Evidence Standard in Vaccine-Liability Case* [online]. [cit. 2018-2-14]. Available at: <https://www.vbb.com/insights/corporate-commercial/corporate-commercial/ecj-lowers-evidence-standard-in-vaccine-liability-case>
- [16] Van Dam, C. (2013). *European Tort Law*, Oxford: Oxford University Press.
- [17] Zavadilová, L. (2016). The Principle of Procedural Autonomy in the Context of the Taking of Evidence in the European Area of Justice. In Kovářová, E., L. Melecký and M. Staničková (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, 2016, pp. 1103-1110.

## European Integration of the Western Balkans: Selected Economic Perspectives

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### **Abstract**

*The term Western Balkans is designed for a group of the following countries in Southeastern Europe which are not yet EU member states: Albania, Bosnia and Herzegovina (BiH), the Former Yugoslav Republic of Macedonia, Kosovo, Montenegro and Serbia. European Integration of the Western Balkans is currently a widely debated topic during the Bulgarian presidency of the Council of the EU. When analysing the process of European Integration of the Western Balkans many researchers focuses on political and legal issues that these countries need to address to become EU member states. However, this paper attempts to analyse selected macroeconomic measures in these countries such as GDP per capita, inflation rate, unemployment rate, budget deficit, general government debt and trade statistics. The paper implies that potential EU accession of the Western Balkans will increase economic attractiveness of this region.*

**Keywords:** EU accession, european integration, Western Balkans (WBs)

**JEL Classification:** F02, F15, O11

### **1. Introduction**

Western Balkan region that consists of Albania, Bosnia and Herzegovina (BiH), the Former Yugoslav Republic of Macedonia (FYROM), Kosovo (which is a disputed territory), Montenegro and Serbia, is in the centre of European Integration agenda. Western Balkans (WBs) are the countries in Southeastern Europe that are not yet EU member states. Except for Kosovo and BiH which are the potential EU candidates, they are all the EU candidate countries. Croatia used to be a part of the WBs but since its accession to the EU in 2013 it is not considered a part of this region any more. Most of WB countries have common history since there were a part of Yugoslavia (BiH, Croatia, FYROM, Kosovo, Montenegro, Serbia, and Slovenia). Therefore, when analysing the past economic events of the WBs, it is vital to consider Yugoslavia as a starting point. Scalera (2017) indicates that a threshold for the EU membership is set at a higher level than ever before, which corresponds to the following logic of EU officials: the farther from Central Europe, the more difficult it is to become an EU member. Mišćević and Mrak (2017) also underline that there is a new approach to enlargement negotiations which considered experiences of previous EU enlargements what seem to make the EU accession process more difficult for the WB than for previous candidate countries, which now are the EU member states. Horúcková and Lebiezick (2014) underline that within the WBs, Montenegro as first started the accession negotiations of joining the EU that was back in 2012. Then, in 2014 Serbia started the accession negotiations and the other countries from the WBs have not started that process yet.

The Western Balkan countries are perceived to be a special challenge for the EU and require its continued commitment in the form of both political and financial support, to work towards political transformation and economic stabilization in the region (Tošović-Stevanović and Ristanović, 2016).

The EU membership perspective of the Western Balkan countries and their full integration in the EU has played a key role in political, social and economic stabilization, alleviation of internal conflicts and implementation of constitutional reforms by individual countries in the region. Although the countries of the Western Balkans are at various stages of their relations and integration with the EU, it should be emphasized that the prospect of accession acts as a mobiliser for all countries in the region and provides an incentive to continue their efforts. Enlargement of the WBs has been promised by the EU several years ago, however that process seems to be much more complex, time-consuming and difficult than it was the countries from Central and Eastern Europe (Jesić et al., 2011).

## 2. Data

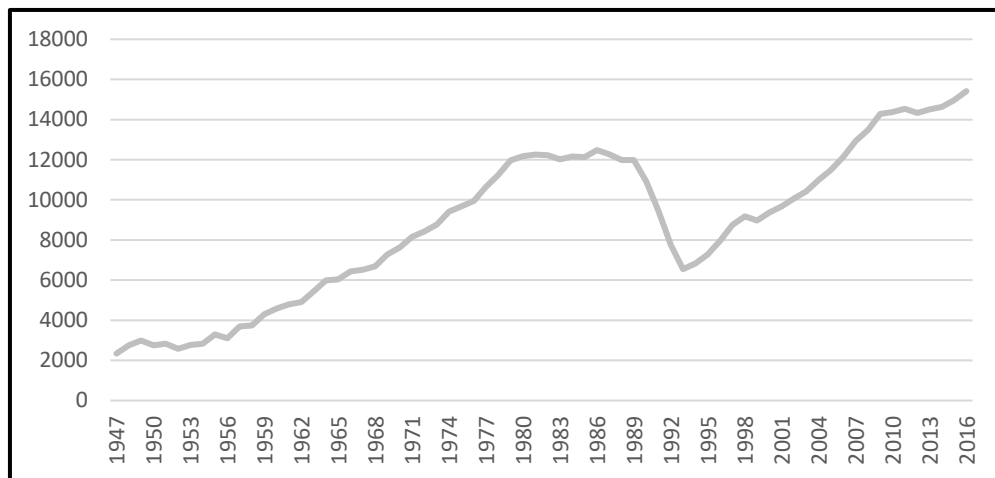
When assessing the impact of the WBs accession to the EU, one should be aware of many limitations. They mainly result from the difficulties in estimating the time horizon of future enlargement, as well as the lack of knowledge as to the specific conditions under which they will join the EU. This, in turn, is important from the point of view of the estimated consequences of EU accession. An important determinant of the possible effects of membership will also be the future shape of EU policies that may be subject to reforms. An additional difficulty is also the unavailability of some statistical data or their inconsistency with the system used in the EU, which limits the reliability of comparisons. Thus the data from the World Bank, IMF, and Eurostat provided in documents by the European Commission were used in order to have the same methodology of particular variable. In addition, Maddison Database by Bolt et al. (2018) is the only database that offers a set of data on population and GDP for the former Yugoslavia (for the period of 1947 – 2016), which is a point of departure for all WBs countries except for Albania.

## 3. Towards Long-Term Economic Growth

After the break-up of Yugoslavia in the 1990s, political situation was instable in the countries of the former Yugoslavia, so does economic one. Instead of focusing of long-term economic growth strategies, these countries faced with numerous conflicts, sanctions, which then had negative consequences on their economic development. This time of political conflicts in Post-Yugoslav countries is often referred in literature as the “lost decade” (Hayoz et al., 2005). Nevertheless, later on, in the period 2001-2008 these countries actually managed to proceed with economic reforms that lead to fast economic growth. According to Uvalić (2010), the problem with this growth was too much reliance on Foreign Direct Investment (FDI) and the so-called ‘credit boom’. Since Post-Yugoslav economies were so much interrelated with global economic architecture, the financial crisis has negatively impacted these countries in the years after 2008. As a result, these economies were slowing down leading to a much lower growth rates and eventually recession.

One of the most common aims of all countries in the World is to be on a fast track of long-term economic growth. Naturally, it is also the case for Post-Yugoslav countries. In order to understand their current economic situation, it is necessary to look at their economic growth path. Figure 1 presents the evolution of GDP per capita in Socialist Federal Republic of Yugoslavia and the successor countries.

**Figure 1: Real GDP per Capita in 2011us\$ in Socialist Federal Republic of Yugoslavia and Its Successors States for the Period of 1947 – 2016**



Source: own elaboration based on the data from Maddison database (Bolt et al., 2018)

Yugoslavia was a fast-growing economy at that time, the growth records up to 1980s were impressive. In 1980s, Yugoslavia ‘stood’ almost in the same place of its GDP per capita. Unfortunately, in the late 1980s and early 1990s due to political conflicts and disputes, what resulted in the break-up of Yugoslavia, the economies of Post-Yugoslav countries were extremely falling down in terms of GDP per capita. Then, they have started their recovery process, except for two breaks: (1) in the late 1990s and then (2) soon after the global financial crisis. One should notice that after the break-up of Yugoslavia, what resulted in a dramatic fall of their economies, the successors states managed to achieve the same level of GDP per capita (as before the break-up) in 2006.

#### 4. Economic Perspectives of the Western Balkans

There were different EU enlargements but it seems that the EU gained a lot in terms of its wealth with 2004 Enlargement of ten new member states (EU-N10) including Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia. However, we cannot compare them and the WBs since they all had different history what affected their human capital, economic growth, and as a result they had different transition processes. Nonetheless, in order to assess their economic potential and eventual contribution to the EU, we need to proceed with the data of economic indicator, starting with GDP.

**Table 1: Share of GDP in Current Prices and Population of the WB Countries in Total EU**

	2016 WBs
% EU GDP	0.53 %
% EU population	3.60 %

Source: own elaboration based on data from IMF

Considering WBs accession to the EU, one should not that the scale of their wealth (0.53 % of EU’s GDP) and population (3.60 % of EU’s population) seems to be rather small and

insignificant. Therefore, from the economic perspective, the EU may not be extremely interested in accession of the WBs since they are not large economies, which would make a difference in the overall EU's wealth, and so does the population. However, as Seroka (2008) rightly notices, one of the most prominent reasons why the EU wants the WBs to be integrated is to ensure security, political stability and economic prosperity in this region. He also admits that the EU accession conditions are set at a higher level for the WBs compared to the 2004 EU Enlargement.

**Table 2: Selected Macroeconomic Measures for the WBs and EU in 2016**

	GDP per capita (current US\$)	GDP growth (annual %)	Inflation rate (annual %)	Unemployment, total (% of total labour force)	Current account balance (% of GDP)	General government gross debt (% of GDP)	Population (Millions of people)
<b>Albania</b>	4125	3.4	1.3	15.0	-7.6	73.2	2.876
<b>BiH</b>	4808	3.1	-1.1	25.8	-4.5	44.7	3.854
<b>FYROM</b>	5237	2.4	-0.2	24.4	-3.1	39	2.073
<b>Kosovo</b>	3661	3.4	0.3	27.5	-9.8	19.9	1.839
<b>Montenegro</b>	7029	2.9	-0.3	17.7	-19	70	0.623
<b>Serbia</b>	5426	2.8	1.1	14.4	-4	74.1	7.058
<b>EU</b>	32242	1.9	0.2	8.0	2.2	85.7	508.773

Source: own elaboration based on the data from the World Bank and IMF

The richest country in terms of the GDP per capita within the WBs is Montenegro with USD 7029 per capita, while the poorest is Kosovo with USD 3661 per capita in 2016. It is quite noticeable that the WB countries are not even close to the EU's GDP per capita which reached the level of USD 32242 in 2016. However, when looking at the GDP growth, the WB economies are growing with the faster pace than the EU. All of them substantially exceeded 2 % of GDP growth in 2016 while the EU's GDP growth accounted for 1.9 %.

In turn, inflation rate was more diversified than the GDP growth. The EU's inflation grew by 0.2 % in 2016 while inflation in Albania, Serbia and Kosovo grew by 1.3 %, 1.1 % and 0.3 % respectively. In remaining countries, inflation fall by 0.2 % in FYROM, 0.3 % in Montenegro and 1.1 % in BiH.

Unemployment rate in the WBs can be seen as one of the most significant problems. The WB countries (except for Albania) faced high unemployment already in 1990, before the Yugoslav Wars and the economic transition process. Then, unemployment increased even more significantly because of the military conflicts and transition process (Gabrielová, 2012). The unemployment rate in the EU accounted for 8.0 % while four out of six WB countries, namely BiH, FYROM and Kosovo, reached the level of more than 20 % of unemployment. Serbia, Albania and Montenegro had the lowest unemployment in the WBs region, which amounted to 14.4 %, 15.0 % and 17.7 % of the total labour force, respectively.

Current account balance in the EU was on average on 2.2 % of surplus in 2016 while all WBs countries noted a deficit. Montenegro was a definite outlier with the largest deficit of 19 % of



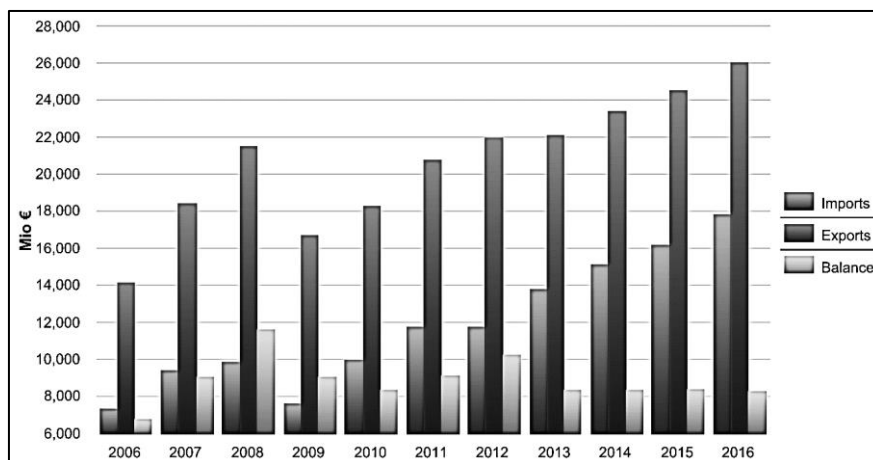
GDP in 2016, then Kosovo 9.8 % and Albania 7.6 %, the remaining countries had a deficit which was smaller than 5 %. When considering the situation in different EU countries, one should note that some of them also faced the budget deficit, however none of them noticed the deficit greater than 5 % of GDP in 2016. Nevertheless, according to Causevic (2012), in the pre-crisis time of 2003-2008, the WBs countries made the budget deficit of 0.8 % of GDP on average. In 2008, when the effects of the economic crisis started to be noticeable, the budget deficit of the WBs reached the level of 5.4 % of GDP on average while in the Eastern Europe and the Caucasus region this number was twice higher (11.4 %), e.g. in Slovakia the deficit accounted for 15 % of GDP.

According to European Commission (2018), the WBs continued to grow its GDP by around 2.5 % of GDP per year. Investment and private consumption is an engine of growth and exports in the WBs. Almost all countries managed to decrease their deficits, however they still keep quite high level of public debt. Economic expansion seems to create more jobs but with a slow pace, thus unemployment rate still remains quite high in the WBs.

In addition, in the view of possible WBs accession to the EU, we need to analyse trade, which is a crucial factor in the European Integration process since once a country joins the EU, it also enters the European Single Market. The WBs like all previous EU candidate countries are advised by the EU to liberalise their intraregional trade, what very often result in the establishment of regional free-trade areas. That was also a case for the WBs, which form the Central European Free Trade Agreement 2006, the so-called CEFTA 2006 (Dragutinović-Mitrović and Bjelić, 2015).

In line with the European Commission (2017) statistics, the main trading partners of the WB are: the EU-28 with a share of 74.1 % of total WBs trade, China, and Russia with 5.5 % and 4.7 % respectively, for the year of 2016. Considering only imports: the EU-28 is at the first place (67.9 %), then China (8.2 %) and Turkey (5.3 %). In exports, the EU-28 is obviously leading with 84.7 %, the third place is still for Turkey (2.6 %), however, the second largest trading partner in exports for the WBs is Russia (3.9 %). Due to political reasons, Russia imposed embargo on some products from the EU and therefore some other countries which have a free trade agreement with Russia, like Serbia, take an advantage of that by increasing their level of exports (especially agricultural products) to Russia (Šabotić et al., 2016).

Figure 2 presents the EU-WB trade flows in the period of 2006 – 2016. When comparing year 2006 and 2016, one may notice that imports, exports and balance of trade increased over that period. However, when we take a closer look what happened in between, then we clearly see that the volume of trade between the EU and the WB was affected by the global economic crises in 2008. According to Panagiotou (2014) the WB were significantly hit by the economic crisis what was especially visible in their growth and trade statistics. Since the main trading partner for the WB countries is the EU, the EU-WB trade noted an decrease in its volume. Bartlett and Prica (2011) noticed that countries of the WB with the higher level of trade integration were exposed to the effects of crisis sooner than those which were less integrated.

**Figure 2: Total Goods: EU Trade Flows and Balance with WB Countries for the Period 2006 – 2016**

Source: European Commission, 2017, p. 3

The fact that the WBs is highly connected with the EU in terms of trade seems to be intuitive. However, it is interesting to look at the WB-EU trade from the EU perspective, what is illustrated in table 2. The EU trade with the WBs accounted only for 1.3 % of total EU trade in 2016. Serbia is outstanding in this statistics compared to other WB countries, because its trade with the EU accounted for 0.59 % of total EU trade in 2016.

**Table 3: EU Trade with the Western Balkans as a % of Total Eu Trade in 2016**

Serbia	BiH	FYROM	Albania	Montenegro	Kosovo	Overall
0.59 %	0.29 %	0.24 %	0.12 %	0.03 %	0.03 %	<b>1.30 %</b>

Source: own elaboration based on the data from the World Bank

EU integration process of the WBs is not only a political issue to tackle, but also it is an economic challenge. Therefore, considering current economic development of the WBs, we can clearly see that they still lag behind the EU average, however, we should not forget that it was also a case for most of the EU candidates (e.g. the EU-N10), which are now successful member states.

## 5. Conclusion

The European Integration of the WBs has been a widely debated issue. Although, all these countries (except for Albania) has a common history, since they were a single country – Yugoslavia, they are all at a different level of EU integration process. However, hitherto only Croatia managed to join the EU. However, one should note that this is a two-side process so not only does positive will from the EU side is needed but also from the WBs. The EU wants the WBs in the EU in order to establish political and economic stability in this part of Europe. The WBs countries, however, seem to be tempted by better economic perspectives when being inside the EU, rather than outside the EU. Therefore, based on the economic measures used in this paper, the WBs should now focus on tackling the following problems: high public debt

and budgetary deficit, and high unemployment. That would then foster their economic development and lead them closer towards the EU accession.

## References

- [1] Bartlett, W., Prica, I. (2011). The Variable Impact of the Global Economic Crisis in South East Europe. *Ekonomski Anali / Economic Annals*, 56(191), pp.7–34.
- [2] Bolt, J., Inklaar, R., de Jong, H. and van Zanden, J.H. (2018) Maddison Project Database, version 2018., *Rebasing 'Maddison': new income comparisons and the shape of long-run economic development*, Maddison Project Working paper 10.
- [3] Causevic, F. (2012). What type of fiscal policy for the Western Balkans during the crisis. *Journal of Southeast European and Black Sea Studies*, 12(2), pp.357–372.
- [4] Dragutinović-Mitrović, R. and Bjelić, P. (2015). Trade regimes and bilateral trade in the EU enlargement process: Focus on the Western Balkans. *Acta Oeconomica*, 65(2), pp.249–270.
- [5] European Commission. (2017). *European Union, Trade in goods with Western Balkans* 6. [online]. [cit.2018-02-22]. Available at: [http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc\\_111477.pdf](http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_111477.pdf)
- [6] European Commission. (2018). *EU Candidate & Potential Candidate Countries' Economic Quarterly (CCEQ) 4th Quarter 2017* [online]. [cit.2018-02-22]. Available at: [https://ec.europa.eu/info/sites/info/files/economy-finance/tp022\\_en.pdf](https://ec.europa.eu/info/sites/info/files/economy-finance/tp022_en.pdf)
- [7] Gabrielová, P. (2012). Western Balkans on the Way to the European Union. In *International Conference on European Integration 2012*. Ostrava: Technical University of Ostrava, Faculty of Economics, pp. 66-76. ISBN 978-80-248-2685-1.
- [8] Hayoz, N., Jesien, L. and P. van Meurs, W. (2005). Enlarged EU - Enlarged Neighbourhood. Perspectives of the European Neighbourhood Policy.
- [9] Horúcková, M., Lebieczik, M., (2014). Economic Development of Montenegro and its Progress towards EU Membership. In *the 2nd International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, pp. 262-271. ISBN 978-80-248-3388-0.
- [10] Jesień, L., Strážay, T. and Żornaczuk, T. (2011). The prospects of the EU enlargement to Western Balkans. *The Polish Institute of International Affairs*. ISBN 978-83-62453-27-6.
- [11] Mišćević, T. and Mrak, M. (2017). The EU Accession Process: Western Balkans vs EU-10. *Politička Misao: Croatian Political Science Review*, 54(4), pp.185–204.
- [12] Panagiotou, R. (2014). The New Environment of EU Enlargement: The Impact of Economic Crisis on the Western Balkans and their EU Accession Prospects. *Contemporary Southeastern Europe*, 1(1), pp.33–57.
- [13] Šabotić, Z., Marinković, S., & Banković, D. (2016). Quantifying the economic parameters as indicators of optimal moment of Serbia's accession to the European Union. *TEME: Casopis Za Društvene Nauke*, 40(1), pp.187-202.
- [14] Scalera, J.E., 2017. *Negotiating Membership in the WTO and EU*. Routledge.

- [15] Seroka, J. (2008). Issues with regional reintegration of the Western Balkans. *Journal of Southern Europe and the Balkans*, 10(1), pp.15–29.
- [16] Tošović-Stevanović, A., Ristanović, V., 2016. Regional Development in the Western Balkans Through the Support of Eu Projects. *Regionalni Razvoj Zemalja Zapadnog Balkana Kroz Podršku Projekata EU.*, 13(2), pp. 175-188.
- [17] Uvalić, M. (2010). *Serbia's Transition. Towards a Better Future*. Palgrave Macmillan UK.

## Green European Integration

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### **Abstract**

*Since World War II almost all countries of the Europe has gone through the integration process which can be defined as an European Integration which evolved into European Union institution. The process include many dimensions, such as: economical, legal or political. The new strategy accepted by European Union titled „Europe 2020” determines a new area of European Integration which can be called as the Green Integration. The article focuses on this specific area of integration which can be a new factor in the future development of the countries in European Union. The article attempts to define and present some integration tools in this area of integration. The main goal of this article is to identify pro-ecological management tools and processes which are used in the Green Integration as one of the dimensions of European integration in wider context. This elements have significant influence on green competitiveness of each European country. Therefore the analysis is based on statistical data and related calculations to support green integration theory. In this paper applied modified multi-criteria Belingers’ method.*

**Keywords:** european integration, green jobs, green economy, sustainable development.

**JEL Classification:** O44, Q56, Q57

### **1. Introduction**

Governments around the world increasingly recognize that the creation of long-term citizen society value depends also on a state’s ability to understand and respond to increasingly intense demands from society. No surprise, that the topic of green initiatives has been gaining ground as governments seek to incorporate concepts such as sustainability and responsible corporate behaviour into their assessments of a country’s long term development plan (Rutkowska et al.,2017). The process of greening the economy is focused on investing in sustainable and durable development. The social, economic, environmental and ethical factors directly affects integration strategy. Then combined with the European integration, the green economy creates new process which can be called as the Green European Integration which will be defined and presented in this article.

The article focuses on this specific area of the European integration which can be a new factor in the future development of the countries in European Union. The article attempts to define and present some integration tools in this area of integration. The main goal of this article is to identify pro-ecological management tools and processes which are used in the Green Integration as one of the dimensions of European integration in wider context. This elements have a significant influence on green competitiveness of each European country. Therefore a quantitative analysis is based on statistical data and related calculations to support green integration theory. In this paper applied modified multi-criteria Belingers’ method.

## 2. The Green European Integration

The durable and sustainable development is the source idea of the Green European Integration based on environmental protection, dated back to period 1958-1972 (Kening-Witkowska, 2005). At that time, the key role was played by the 100<sup>th</sup> article of the Treaty of the European Economic Community (EEC) which states as follows "The council shall, acting unanimously a proposal from the commission and after consulting the European Parliament and the Economic and Social Committee, issue directives for the approximation of such laws, regulations or administrative provisions of the Member States as directly affect the establishment or functioning of the common market" (Council of the European Communities and Commission of the European Communities, 1992). This specific normative act gave the European Council the power to unanimously adopt directives in order to harmonize regulations in the member countries (Raux, 1999). Within the framework of European integration it can be also distinguished a field of activities aimed at protecting the environment and much wider action later, which can be described as the Green European Integration. In Table 1 were presented qualitative objectives of the "New Union Environment Action Programme to 2020", that can be treated as development directions for Green European Integration.

**Table 1: Qualitative Goals of the "Union Environment Action Programme to 2020"**

Qualitative goals
1. to protect, conserve and enhance the Union's natural capital
2. to turn the Union into a resource-efficient, green, and competitive low-carbon economy
3. to safeguard the Union's citizens from environment-related pressures and risks to health and wellbeing
4. to maximise the benefits of the Union's environment legislation by improving implementation
5. to increase knowledge about the environment and widen the evidence base for policy
6. to secure investment for environment and climate policy and account for the environmental costs of any societal activities
7. to better integrate environmental concerns into other policy areas and ensure coherence when creating new policy
8. to make the Union's cities more sustainable
9. to help the Union address international environmental and climate challenges more effectively.

Source: European Commission. (2014) *The new general Union Environment Action Programme to 2020* [online]

The most important programs which were leading to the Green Integration were the Environmental Action Programmes (EAP). The turning point of the Green European Integration was the 3<sup>rd</sup> EAP which oriented the activities of EU countries towards the broadly defined sustainable development (UEAPME [online], 2002). And the symptom of this was the correlation of employment policy with environmental policy (Górski, 2006). The result of these activities was the creation idea of the Green Jobs that can be treated as "a job or self-employment that genuinely contributes to a more sustainable world" (Rutkowska-Podołowska et al., 2014). The International Labour Office defined this as "a jobs include direct employment which reduces environmental impact, ultimately to levels that are sustainable. This definition includes jobs that help to reduce the consumption of energy and raw materials, decarbonizes the economy, protect and restore ecosystems and biodiversity and minimize the production of waste and pollution. It is broader concept of "green jobs", which might embrace any new job

in a sector which as a smaller than average environmental footprint and contributes to improving overall performance, albeit perhaps only marginally” (ILO, 2008).

The new general Union Environment Action Programme which is entitled "Living well, within the limits of our planet " and “Europe 2020” strategy play a key role in a Green European Integration. The main mission of this programme is “the EU has agreed to step up its efforts to protect our natural capital, stimulate resource-efficient, low-carbon growth and innovation, and safeguard people’s health and wellbeing – while respecting the Earth’s natural limits” (European Commission [online], 2014). The strategy “Europe 2020” and “Union Environment Action Programme” gives special character to the Green European Integration and treats it as a pillar for sustainable development of each country in EU. Table 2 presents specific goals and measures from “Europe 2020” strategy that can be considered as an integration tool, because it is possible to monitor the implementation of specific goals by individual countries of the community.

**Table 2: Quantitative Goals for the “Europe 2020” Strategy**

Quantitative goals (criterion - C)	Unit	Target
C1: to reduce greenhouse gas emissions (Greenhouse gas emissions should be reduced by 20% compared to 1990)	index 1990 = 100	80
C2: to reduce greenhouse gas emissions in ESD sectors	million tonnes of CO <sub>2</sub> equivalent	2618.17
C3: to reduce primary energy consumption	million tonnes of oil equivalent (TOE)	1483
C4: to reduce final energy consumption	million tonnes of oil equivalent (TOE)	1086
C5: to increase share of renewable energy in gross final energy consumption	per cent %	20

Source: Eurostat (2018). *Europe 2020 strategy. Headline Indicators* [online]

Pro-ecological management plays an important role in the Green European Integration, especially in the implementation of quantitative objectives of the “Europe 2020” strategy. Pro-ecological management has also influence to the green competitiveness of individual European countries (Kasztelan, 2016). Term pro-ecological management should be defined by the management functions. According to the H. Fayol (1917) it is possible to distinguish five functions of management: planning, organizing, commanding, coordinating and controlling. Therefore, pro-ecological management is a process with coordinated activities under the five management functions, which lead to the improvement of the natural environment. This process consists of activities aimed at rational resource management, protection and shaping the environment and creating pro-ecological attitudes (Marciniuk-Kluska, 2013). In each of these aspects management functions can be implemented. The most important activities undertaken by the enterprises is implementation of an environmental management system based on the ISO 14001 standard which is integrated with the entire organization management system (Marciniuk-Kluska, 2013). The second level is local government units and the third is the government level. Both in the second and third level one of the most important activities is the protection of the natural environment and the creation of Green Jobs. Pro-ecological tools can be divided into three categories: instruments in the form of standards and regulations, stimulating instruments, control and repression instruments (Table 3).

**Table 3: Instruments of Pro-ecological Management**

Instruments in the form of standards and regulations	Stimulating instruments	Control and repression instruments
<ul style="list-style-type: none"> <li>• Product and process standards (application of recovery and recycling, manufacture of products from safe substances)</li> <li>• Atmospheric air quality standards</li> <li>• Water quality standard</li> <li>• Soil quality standards</li> <li>• Permits for entering sewage into waters or land</li> <li>• Permission for waste generation</li> <li>• Permits for the introduction of gases and dust</li> <li>• Noise emission license</li> <li>• Concessions for mining natural resources</li> <li>• New technological standards (use of low-waste technologies, low failure rate of manufactured products)</li> </ul>	<ul style="list-style-type: none"> <li>• Subsidies for pro-environmental activities</li> <li>• Tax breaks</li> <li>• Preferred loans (a subholder in the form of a difference in interest rates)</li> <li>• Subventions for a specific type of activity leading to an improvement of the environment</li> <li>• Ecological insurance against legal liability for environmental pollution</li> </ul>	<ul style="list-style-type: none"> <li>• Legal actions aimed at forcing compliance with environmental protection requirements</li> <li>• Charges for the emission of pollutants into the environment</li> <li>• Inspections to determine the level of compliance with environmental regulations</li> <li>• Negotiations with entities violating the environmental regulations in order to direct actions that meet specific standards and regulations</li> <li>• Fees for using the environment (e.g. cutting trees and shrubs)</li> <li>• Product charges (for placing in public trading or using). It applies to products causing pollution in one of the product life phases</li> <li>• Service fees (e.g. for sewage disposal, waste disposal)</li> </ul>

Source: author's elaboration based on (Marciniuk-Kluska, 2013)

### 3. Problem Formulation and Methodology

In order to achieve the quality goals included in the "Europe 2020" strategy, the countries need a tool to more effectively achieve the assumed objectives (Melecký and Staničková, 2014). Pro-ecological management may be such a tool (Larue, 2018). Therefore, it seems necessary to specify several pro-ecological management instruments (Wren, 2015). However, it is important to point out that pro-ecological actions taken at all levels within one country have a particular impact on the environmental competitiveness. Pro-ecological actions also oriented and directs the activities of individual countries towards sustainable development. The concept of green competitiveness can only be defined by a number of factors (Kasztelan, 2016). Three groups of indicator group define the level of green competitiveness of individual countries: natural resources, anthropopressure and eco-behaviours (Kasztelan, 2016). Countries with rich natural resources such as Sweden, Finland, Latvia, Denmark and Italy have the highest level of green competition. However, it is important to point out that pro-ecological actions taken at all levels within one country have a particular impact on factors from the anthropopressure and



eco-behaviours group of indicator which have influence on the environmental competitiveness. Therefore, pro-ecological management instruments can be the foundation for the green competitiveness of individual countries within the European Community and, in a wider context influence the level of the Green European Integration. Methodology proposed in this paper is based on modified multi-criteria Bellinger's method to analyse chosen factors of Green European Integration. Bellinger's method allows to compare evaluation results where different criteria were used (Malara et.al., 2016). In this paper modified method has six steps, as follow:

1. define criteria which will be used for decision making,
2. identify the measuring units and its desirable changes (in given criteria),
3. determine the target of each criterion,
4. present the result for each criterion as a percentage of the distance from the measured value of criterion to target value,
5. create a table containing the member states assigned to the criteria for all variants in three groups (based on coefficient variation),
6. determine the most frequent (over two occurs) states in the group.

The criteria used in further analysis were based on Table 2, which can be indicators of Green European Integration. Then the groups obtained from analysis can indicate which countries are close to goals appointed in "Europe 2020" strategy. Identification and measurement of quantitative variables combined with qualitative goals are also important pro-ecological management tools for EU member states.

#### 4. Problem Solution

Based on described above methodology as steps of modified Bellinger's method the year 2016 was appointed for the further analysis, due to the availability of statistical data for all European Union countries. Criteria were numbered in Table 4, as in Table 2, which are quantitative goals for the Europe 2020 strategy. The criteria values units are the same as in Table 2. The 2<sup>nd</sup> step of accepted in this paper method requires measuring units and direction of change, which allows to set the lower and upper limit for each change criterion and divide them to three groups of countries involved in achieving goals of Europe 2020. Division in groups is based on standard deviation, which allowed to divide obtained data to numbered three groups. The group I consist an excellent performers, group II average involved states, and group III underperformers (countries which exceed targets listed in Table 2).

**Table 4: Values Ranges for Each of Group of Analysed European Union Countries**

Criterion	Group I	Group II	Group III
C1	41,99 : 66,36	70,71 : 88,93	90,68 : 144,45
C2	1,34 : 14,28	19,74 : 46,48	50,16 : 450,42
C3	0,7 : 14,6	15,5 : 39,9	47,1 : 295,8
C4	0,6 : 9,7	10,4 : 28,1	32,6 : 216,4
C5	5,4 : 12,0	14,2 : 21,3	25,0 : 53,8

Source: Results of own calculations based on Eurostat (2018). *Europe 2020 strategy. Headline Indicators* [online]

In Table 5 were presented the results for each criterion as a percentage of the distance from the measured value of criterion to the target value presented in table 2. First four criteria aims are to reduce their measured values, when 5<sup>th</sup> criterion aim is to increase its measured value, therefore this criterion has reversed values as presented in Table 5.

**Table 5: Values Ranges for Each of Group of Analysed European Union Countries as Per Cent of Distance to Their Own Goals (Negative Numbers in Brackets)**

Criterion	Group I	Group II	Group III
C1 (%)	(-17,05) : (-47,51)	(-11,61) : 11,16	13,35 : 80,56
C2 (%)	(-18,30) : (-4,24)	(-0,87) : 10,32	11,21 : 26,09
C3 (%)	(-12,13) : (-2,31)	(-0,95) : 4,86	5,49 : 27,35
C4 (%)	(-24,31) : (-11,37)	(-7,59) : 3,92	4,76 : 26,40
C5 (%)	41,50 : 4,17	2,35 : (-15,56)	(-17,78) : (-57,14)

Source: Results of own calculations based on Eurostat (2018). *Europe 2020 strategy. Headline Indicators* [online]

Following the next step of the accepted in this paper method was to present the group of countries in Table 6. The groups division is the same as in Table 5. The group I consists countries which do not have to reduce their impact on the natural environment or are excellent performers in share of renewable energy in gross final energy consumption. The group II consists countries with average results of reaching their goals listed in Table 2. Whereas group III presents countries which have to intense their efforts to fulfil set goals.

**Table 6: EU28 Members States Classified in Groups According to Accepted Criteria**

Criterion	Group I	Group II	Group III
C1	United Kingdom, Hungary, Czechia, Bulgaria, Slovakia, Romania, Estonia, Latvia, Lithuania,	Luxembourg, France, Italy, Poland, Belgium, Finland, Sweden, Croatia, Germany, Denmark,	Cyprus, Spain, Portugal, Ireland, Austria, Malta, Greece, Netherlands, Slovenia,
C2	Croatia, Slovakia, Greece, Hungary, Romania, Portugal, Lithuania. Czechia, Latvia, Slovenia,	United Kingdom, Spain, Sweden, Poland, Bulgaria, Italy, Netherlands, Estonia, Denmark,	France, Luxembourg, Austria, Cyprus, Belgium, Germany, Finland, Malta, Ireland,
C3	Croatia, Romania, Latvia, Slovenia, Finland, Lithuania, Luxembourg, Estonia, Italy	Slovakia, Greece, Poland, Spain, Portugal, Denmark, Hungary, Malta, Czechia, Austria	United Kingdom, Bulgaria, Ireland, Netherlands, Germany, France, Sweden, Cyprus, Belgium
C4	Romania, Latvia, Greece, Portugal, Poland, Italy, Croatia, Finland, Netherlands	Luxembourg, Slovenia, Czechia, Ireland, Denmark, Estonia, Cyprus, Spain, United Kingdom, Sweden	Germany, Belgium, Austria, France, Bulgaria, Slovakia, Lithuania, Malta, Hungary
C5	Romania, Denmark, Hungary, Sweden, Lithuania, Czechia, Estonia, Bulgaria, Croatia	Greece, Slovenia, Slovakia, Spain, Portugal, Latvia, Austria, Finland, Italy	Netherlands, Luxembourg, Ireland, Malta, United Kingdom, Belgium, France, Cyprus, Poland, Germany

Source: own calculations results based on Eurostat (2018). *Europe 2020 strategy. Headline Indicators* [online].

Based on this results it is possible to identify most frequent occurring EU-28 member states in each group as presented in Table 7.

**Table 7: The Most Frequent States in Each of Group**

Group I	Group II	Group III
Croatia, Czechia, Estonia, Hungary, Latvia Lithuania, Romania	Denmark, Italy, Poland, Slovakia, Spain, Sweden	Austria, Belgium, Cyprus France, Germany, Malta, Netherlands

Source: own calculations results

The conclusions from the presented analysis are as follows: majority of so-called “old member” states have to increase their efforts to meet goal and criteria set in “Europe 2020” strategy. The reason of this strong division, can be explained by high industrialization of these countries. On the other hand there is a large post-soviet countries visible in group I, which easily meet criteria of Green European Integration. Pro-ecological management and environment protection are subject of matter of “new member” states (who joined EU in 2004), which introduce new clean technologies immediately and are eager to become new green leaders of European Union. Some countries with rich natural resources such as Sweden, Finland, Latvia, Denmark and Italy have the highest level of green competition (Kasztelan, 2016) but it does not mean that they are leaders of environment protection or pro-ecological management as it was proved based on Eurostat data analysis.

## 5. Conclusion

Presented in this article quantitative goals of “Europe 2020” as pro-ecological management tools are measurable and credible based on Eurostat data. Analysis proved also that greening of the economy is easier for relatively new member states than for other countries. Contrary to widely known as pro-ecological countries some countries has not yet earned their new reputation, although they protect natural environment on excellent level and creates new green economy opportunities.

The article focuses on green aspects of the European integration which can be a new factor in the future development of the countries in European Union, therefore they are visible two speeds of development in Europe are also proved in this paper. There are countries better developed and more industrialized (group III), and wider group (in this paper pointed as group I and II) which possess large environmental competitive advantage in process of Green European integration, which is still in its very beginning. Presented in this article analysis requires verification in wider time span and comparison with other methods to examine green competitiveness of each European country.

## References

- [1] Council of the European Communities and Commission of the European Communities (1992) *Treaty on European Union*. Luxembourg: Office for Official Publications of the European Communities.
- [2] European Commission. (2014). *The new general Union Environment Action Programme to 2020* [online]. [cit.2018-02-11]. Available at: <http://ec.europa.eu/environment/pubs/pdf/factsheets/7eap/en.pdf>

- [3] Eurostat (2018). *Europe 2020 strategy. Headline Indicators* [online]. [cit.2018-02-08]. Available: [http://ec.europa.eu/eurostat/cache/Euro\\_2020/E2020\\_EN.html](http://ec.europa.eu/eurostat/cache/Euro_2020/E2020_EN.html)
- [4] Fayol, H. (1917). *General and Industrial Management*, pp. 45.
- [5] Górski, M. (2006). *Prawo ochrony środowiska*. Bydgoszcz, pp. 39.
- [6] ILO (2008). *Global challenges for sustainable development: strategies for green jobs*. ILO Background Note G8 Labour and Employment Ministers Conference Niigata, Japan 2008.
- [7] Kasztelan, A. (2016). *Green Competitiveness of the EU countries*. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 415-424.
- [8] Kening-Witkowska, M.M. (2005). *Prawo środowiska Unii Europejskiej. Zagadnienia systemowe*, Warszawa, pp.17.
- [9] Larue, B. (2018). *Economic Integration Reconsidered*. *Canadian Journal Of Agricultural Economics-Revue Canadienne D'Agroeconomie*, vol. 66, iss. 1, pp. 5-25.
- [10] Malara, Z., Miško, R., Sulich, A. (2016). *Wrocław University of Technology graduates' career paths*. *Vesnik Grodzenskaga džâržanaŭga uniwersitèta imâ Ánkì Kupaly. Ser. 5, Ękonomika, Sacyâlogiâ, Biâlogiâ*. 2016, vol. 6, iss. 3, pp. 6-12.
- [11] Marciniuk-Kluska, A. (2013). *Environmental management in the scope of economic sustainable development*. *Zeszyty Naukowe Uniwersytetu Przyrodniczo-Humanistycznego w Siedlcach*. Siedlce.
- [12] Melecký, L. and Staničková, M. (2014). *Regional Efficiency Evaluation by DEA Approach: Comparison of Selected EU15 and EU13 Countries*. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 465–475.
- [13] Raux, J. (1999). *Kompetencje Wspólnoty Europejskiej w zakresie zawierania umów w dziedzinie środowiska*. In *Wspólnota Europejska, a środowisko naturalne*. Lublin, pp.160.
- [14] Rutkowska, M., Sulich, A., Pakulska J., (2017) *Environmental Insurance in Poland and Selected EU Countries*. *Zeszyty Naukowe Wyższej Szkoły Humanitas. Zarządzanie*. Iss. 3, pp. 79-90.
- [15] Rutkowska-Podołowska, M., Sulich, A., Szczygieł N. (2016). *Green Jobs*. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 822-829.
- [16] UEAPME (2002). *EU Environmental Issues and Policies* [online]. [cit.2018-02-11]. Available at: <http://www.ueapme.com/business-support%20II/Training%20Tools/Confartigianato/Environment/EU%20Environmental%20Guide.pdf>
- [17] Wren, D.A. (2015). *The Third Part Of Industrial And General Management*. In Peaucelle, J.L. and Guthrie, C. (eds.). *Henri Fayol, the Manager: Studies in Business Histor*. London: Pickering & Chatto Publ., Issue 6, pp. 183.

## European Union Member States and Democracy: Central Europe Towards Authoritarian Governance

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### **Abstract**

*Political system of democracy, so important for cohesion of EU, is currently being questioned in Hungary, Poland and probably also in the Czech Republic and Slovakia. Modern democracy is unique balance of freedom and equality, when freedom is a precondition for equality and when equality allows for freedom. Nevertheless, under certain circumstances, democracy can be self-destructive: if the extent of freedoms is reduced to such an extent that equality ceases to be necessary, or if equality is over-sized at the expense of freedom. This is close to the concept of illiberal democracy and thus denial of democracy. The ten necessary conditions that underpin the democratic political system and their limitation in Hungary and Poland lead to retreat the political system of democracy and shift to the authoritarian government.*

**Keywords:** *authoritarianism, Central Europe, conditions of democracy, illiberal democracy*

### **1. Introduction**

The political system of democracy, which includes the indwelling political freedom and other freedoms in society (legal, social, biological ...), has been the product of an industrial society, where, as the form of government accelerated the process of modernization, so that led to today's globalization and the information society. Systemic essence of democracy is unique balance between freedom and equality. However democracy, under certain circumstances, can be self-destructive as it can liquidate this unique balance, its value substance. This is especially true when political freedoms in society are reduced.

Political system of democracy has never been perceived as a final form of government, nor in ancient times (Aristotle) nor in modern society (Churchill, Dahl...), so it has a chance to improve. The concept of democracy is culturally determined, it is the achievement of European civilization adopted by other cultures, it is normative - as democracy is most often defined as an ideal norm associated with certain values, it is evolving - because our ideas about democracy also change as a result of changes of political reality, and especially polyvalent. The term democracy is extremely polyvalent, but its homeland is political science, also with number of meanings. In political science, democracy can be understood as a theory (hypothesis system) as well as a scientific theory, science (system of verified hypotheses) ideology (the theory of the world, society and man from which a certain policy is derived, with a tendency to expand by violence) and political practice. The scope of this study allows only the last meaning to be developed. The political system of democracy is probably the core of today's democracy itself, democracy as a certain value-based and institutionally defined way of organizing society. That is why we can distinguish between the political systems of democratic states (states with predominantly this value-based and institutionally defined way

of organizing society) and undemocratic (states with either a value-based and institutionally different structure or only the formal conditions of democracy, i.e. without real democratic content).

The precondition and effect of the democratic political system is the unique in human history balance of political freedom and political equality. Freedom is a condition of equality, and equality allows freedom. Few people have a negative answer to the question of whether they want to be free. Without equality, however, a large proportion of people can imagine their lives. Nevertheless, equality is needed primarily to ensure our freedom. On the scales of democracy, freedom and equality are balanced. When one of them significantly prevails, then one is the opposite of the other. When we reduce equality, we get from freedom to anarchy and hence inequality, when we reduce equality, we get, for example, from socialism to primitive communism and hence system without political freedoms. Democracy, especially in its liberal form, is undoubtedly the best achievement of European civilization development, when the modern state represents a rational approach also against any attempt by a democratic society to create unity by violence. The level of the ratio between freedom and equality is culturally given, in some societies there is more accentuated freedom, and in others societies are equal. This discrepancy is reflected in a specific form of the political system of democracy (for example, freedom in the US and the UK has accent on political and legal freedom, in addition, in Germany, social freedom is accentuated, just as in France). Equality is the leg, freedom is the head. When democratic freedoms are reduced, equality is no longer useful, and therefore it will no longer be important. Legs will not have anything to wear. Although democracy is in its present form the achievement of civilization and is proclaimed by all EU states (European Union Treaties, [online], 2018), its achievement is not the ultimate goal, and end of history (Fukujama [online] 2018), and democracy can under certain circumstances return course. Causes can be both internal (leaders, worsening or, on the contrary, total improvement in economic conditions, sources of energy finding, nationalism, religiosity, bureaucracy) and external (pressure from another state or a group of states: political, military, economic, etc.). At the same time, it can be assumed that along the transition from an industrial society to an information society, the nature of governance will change, as it has always happened in history when basic technology has changed. It should be emphasized that modern democracy began to be created when agricultural technology was gradually supplemented by an industrial one that changed all aspects of human life - perceptions of time and space, human needs, increased human incompetence and dependence on society, ways of communication, social structure, urbanism, leisure time, relations between states - and triggered the need for new governance, new division of power, where the central role of the system is played by parliament as a source of legislative power. Historically, this model was preceded by a model of democracy without a representative parliament (antique Athens), and a model of parliament without democracy, as the parliaments originated originally without democratic elements (House of Lords in UK). Not later than 18-20 century the requirement for election was attached to the parliaments, as a new democratic element of election. Today, we are in the midst of finding a new form of public power. The information society offers technical possibilities to direct democracy (electronic elections in Estonia or Alaska). In this context, delegitimization of the representation (parliaments) is also occurring, and therefore the search for a direct path between the strong leader and the citizens. Some tendencies in Central Europe, but not only there, confirm such a claim. In the essay *The Power of the Powerless* from 1978 (Havel [online] 2018) Vaclav Havel uses the term post-democracy, the shift sees in the gradual replacement of formal to informal and hierarchical to non-hierarchical structures, formulates the concept of nonpolitical politics that negates political parties. Today, the non-political politics takes on new forms. The role of political parties in contemporary politics is changing, as politics today in democratic countries is a special form of show where candidates for civic

voices exhibit public interest in a public space where most of political parties have a very similar inconsistent agenda. Voters, of course, can identify politicians and their policies with a dual approach: rational and emotional. Rational cognition is based on examining the political agenda, considering its consistency and long-term, compare the programs of other political subjects. Of course, this presupposes a certain minimal theoretical training, so it is obvious that rather minority of society is approaching politics in this way. The majority of the society then judges and perceives politics primarily emotionally as something they like or dislike because it raises some negative or positive feelings in them. This way, they approach repeated political slogans and mottos and thus the individual politicians. This approach is particularly strong in the election term, which can be seen as a continuous show, an effort to win at all costs and whatever means.

The following chapter provides a detailed description of the necessary conditions for the political system of democracy.

## **2. The Ten Necessary Conditions of the Political System of Democracy**

The ten necessary conditions of democracy represent the theoretical system with intrinsic consistency. Since the conditions are essential, each democratic country must respect them, when internal rate is given by the cultural specificity. Nevertheless, it can happen that the result of the political development will be the preservation of the form of democracy while emptying the content of democracy. For example, "cementing" the position of the governing party by changing the recount to parliament after the elections, while maintaining the principle of universal suffrage and political pluralism, as has happened in Hungary. Or, the status of media can be changed from public to state and the flow of information in the country to the benefit of the ruling party, as it has already happened in Hungary and Poland. Also, it can be subordinated the central bank by putting in place appropriate implementation descriptions, changing the constitutional court's powers, or manipulating the choice of certain judges, as we watch in Hungary and Poland. Finally, you can give the minority government the same value as the majority government, despite not supporting Parliament, and making, for example, significant personnel changes, as in the Czech Republic. In the countries mentioned, this allows too flexible, unstable political culture, and also - with the exception of the Czech Republic - shallow democratic roots.

Notwithstanding these attempts, European civilization has so far failed to provide a better way of governance than the one that is characterized by ten claims: the sovereignty of citizens in the creation of public power, split political power in the state (legislative, executive and judicial), electoral law, political plurality, government for a predetermined time, decentralization of decision making, majority decision-making and protection of minorities in society, free media and right to information, protection of human rights and freedoms and the legal framework of the system. Below follows a more detailed explanation of each of the ten conditions necessary for democracy.

The sovereignty of citizens in the creation of public power is the basic source for theory of democracy: derivation of political power from the citizens themselves and their equality to the creation of political power. Democracy differs from other political systems at this point - the only limiting factor is citizenship, not membership of a social or national group. Excluded from the creation of power are logically those who do not have a civil-law relationship with the state. Citizens' sovereignty in the formation of political power is a prerequisite for divided political power and elections.

Divided political power in a state - legislative, executive and judicial power - is the opposite of absolute power, centered on one or more people, who are creators, executors and controllers of political power. The relationship between the legislative power (parliament) and the executive power (government, president) is the source of the designation of a democratic state as a presidential or parliamentary democracy. Nowadays, in some democratic countries, the decline in confidence in parliament (Hungary, Poland, the Czech Republic, and Slovakia) reduces the legitimacy of the representation, and the search for a direct path between the strong leader and the citizens. However, both forms (direct and indirect democracy) are useful; the complexity of the agenda favors parliamentary representation and the legitimacy of decisions (issues of common life) favor referendum. Split political power in society is a prerequisite for the elections.

The prerequisites for free elections are, in particular, two: universal suffrage, guaranteeing equality of citizens and political pluralism, which guarantees political freedom for citizens. If we restrict freedom or equality, it will reduce the value of the other, which is certainly wrong for democracy. Political freedom is to have as many political parties as citizens want if their program and activity is not in conflict with the constitution.

Decentralization of decision-making is the need to make decisions at the lowest yet effective level. In this way, it is also possible to characterize decentralization by the principle of subsidiarity, widely used in the European Communities in past.

Majority decision-making goes hand in hand with the protection of minorities. It is a certain balance: when a majority is disadvantaged, it is dominated by a minority (aristocracy or elite, dictator, one political party, national group, biological minority); history confirms countless examples (absolute monarchy, authoritarian regimes and dictatorships, communist states, Yugoslavia and Serbs, South African racism). However, it is more common to deny minority rights: political (opposition), social (seniors), biological (other sexual orientation, race), and national (minorities). Both majority and minority can make a decision inhumane. This also applies to the referendum, decision of the majority. But who, after the referendum, will protect minority interests? Therefore, the only majority decision-making with the protection of minorities is a prerequisite for democracy.

The right to information and only on the basis of free information is it possible to choose alternatives from options, says doyen theory of democracy Robert Dahl (Dahl 1989). That is why most of democratic countries there is a form of public media, financially supported by concessionary fees, to circumvent the natural desire of governments and political authorities to control directly the media, thus challenging public opinion. Of course, there are also a number of private media of various forms that offer information. Consequently, freedom of private mass media, especially the Internet, where it is almost impossible to find authors, donors and advertisers of the information flow, can influence public opinion wherever there is free and anonymous expression space.

The protection of human rights and freedoms is a unique achievement of our civilization. The migratory wave of the last decade has hit Europe not only for its economic attractiveness, but above all as a space that respects the rights and freedoms to all inhabitants of EU, offered by liberal democracies (Hobsbawm 2009, pp.79-95). In Europe, freedom has an individual, not a group dimension. It is based on European liberalism (Svensson 1995) and individual freedom and justice, especially in the political, legal, but also social and biological spheres. Not only in connection with the migratory wave, constitutional security of human rights is currently under the microscope of experts.



It is extremely important for the political system of democracy to have a legal framework. The previous nine necessary conditions would have no meaning without the rule of law. In the rule of law, there is a legally consistent hierarchy of laws where the state and its institutions are also objects of law. By condemning equality before the law and the presumption of innocence, the rule of law creates a space for political equality and political freedom. Denying the rule of law is a boomerang instrument in democracy. Decline of Ancient Greek states was caused by a low respect for the law.

Examples of emptying the necessary conditions of democracy in semi-Byzantine Hungary, the authoritarian Poland also in Czech Republic are included in the following chapter.

### **3. Hungary and Poland - Limits of Democratic Political System**

The modern history of Central Europe region is extremely diversified and discontinuous. Various empires (Habsburg, Russian and Ottoman), and strong national influences (German and Jewish) imprinted its cultural footprint in Central Europe. Therefore, Hungary, Poland and the Czech Republic have interrupted history of statehood, and therefore also interrupted process of state-forming institutions and political culture (Almond, Verba 1980, pp.1-37). Institutionalization of political life is necessary for democracy. Consequently, country with low confidence in political institutions and a strong leadership usually tends to authoritarianism, autocracy or dictatorship. Complicated history of Central Europe is also a cause for potential nationalism and clericalism; the shallow roots of democracy are the cause for political instability.

Hungary's modern history is linked to the Habsburg and Ottoman empires and loss of two thirds of its historical territory after World War 1st is the reason for Hungarian national nostalgia. Hungarian public opinion tends often to authoritarianism and there is strong tendency towards leadership (Lendvai, 2012, p. 7). The Hungarian parliamentary elections in April 2018 will mark the role of the ruling party FIDESZ and its leader, Viktor Orbán. When in 2010 his party won, the constitutional majority started process of fundamental political changes. First of all, the public media has been transformed into state-controlled media, including complete personal exchanges. Then modification of role the Constitutional Court followed, after that electoral system has been changed in favor of big parties, also the functioning of the central bank was modified, with personal changes. Mentioned changes were carried out in the first term of Orbán's government (2010-2014). In the second term (2014-2018) FIDESZ party lost its constitutional majority in the parliament, but retains a simple majority. Other political parties influence on politics is not very important. Very effective tools for influencing public opinion, especially on the outside, are the organization of so-called public consultations. This is a government campaign that asks for answers to a question or a questionnaire, while the wording is guiding and waking up emotional responses. The on-line Dictionary of Czech language contain already the verb "orbanizovat" - to fight fiercely against immigrants, to spread xenophobia and the fear of refugees; also the word "orbanistán" - Hungary under the rule of Viktor Orbán; sometimes also "orbánisztán" ( Čeština 2.0 [online] 2018).

Viktor Orbán, Prime Minister of Hungary, described in his speech Bálbányos Summer Free University in 2014 his views about the future of Hungary as an illiberal state. In his interpretation the illiberal state does not reject the values of the liberalism, such as freedom, but does not adopt the liberalism as the central element of state organization, but instead includes a different, special, national approach. Orbán listed Singapore, Russia, Turkey and China as examples of "successful" nations, "none of which is liberal and some of which aren't even democracies"... (Orbán, [online] 2018). At the same time, however, he advocates „If

someone wants to say that a democracy is necessarily liberal, that person demands privilege for an ideology. Which we cannot grant him”(Orbán, [online] 2018). Orbán has numerous critics, also in Hungary. In 2015, respected Hungarian academician, political scientist and economist, Kornai János, one of the most important Hungarian social scientists, wrote in his study “U-Turn” following: “No matter how hard the authorities try to subdue the organizations which form public opinion, the IT revolution has made their task more difficult... The Fidesz government would love to find a way to prevent this too. Not long ago it proposed the introduction of an internet tax. Each gigabyte data transfer would have been taxed to the tune of 150 forints (roughly 55 USD cents). Within a few days, mass demonstrations had been organized; images of the protesters circulated in the international press. Viktor Orbán retreated half-way: as I write these lines it is not yet clear if the plan has been abandoned for good or merely postponed. Whatever may happen, the image of tens of thousands of demonstrators raising their mobile phones to the sky has become a symbol. The light from the tiny screens might even have illuminated the clouds of the internet - it will prove difficult for any regime today to raise impassable barriers to the flow of free speech „. János Kornai wrote in 2017 “Medical Report. Studies on Hungarian condition”. The consistent book records Hungarian deflection from democracy in the past decade, where author also makes a precise difference between democracy, authoritarianism and dictatorship (Kornai [online] 2018). So, it is possible to summarize, that in Hungary there has been growing a significant imbalance between freedom and equality in last years, necessary conditions of democracy were seriously touched: split of political power in the state, electoral law, decentralization, protection of minorities, right to information and free media, protection of human rights and freedoms and, first of all, legal framework of the political system. Orbán’s political model has its followers and some political leaders in Europe, for example in Poland, are also approaching this model.

Poland has a modern history connected with Russia and Germany, less with Habsburg and has never been an organic part only of Central Europe. Polish Catholicism has a great influence on politics, on formation of social values and public opinion. Poland has great distance between town and countryside, rather agricultural tradition and prevailing political line frequently reflects the mood of the rural majority, despite the fact that intellectual minority has usually high impact to creation of politics. Similar to Hungary, tendency toward leadership is strong enough; public opinion tolerates exceeding of democratic rules (Kucharczyk, Zbieranek, 2010). Poland is in the middle of election term (2016), with one party government (Prawo i Sprawiedliwość), majority in parliament and populist leader Jaroslaw Kaczyński, who controls as well executive and parliament power. The leader of the PiS government party Jaroslaw Kaczyński is completely out of the top structure, yet controls the Polish politics. It is a kind of Puppet Theater when watching the obedience of top Polish politicians. However, the demolition of democratic freedoms is similar to Hungarian. The government takes control of the media and also influences the Constitutional Court, so that the government is not subject to any control - neither by voters nor by independent judiciary authorities. In Poland a similar trend as in Hungary can be observed, when the pro-European Liberal Parties (Magyar Szocialista Párt in Hungary, Platforma Obywatelska in Poland) were changed in rather conservative nationalist parties, with an emphasis on domestic rather than foreign (European) policy, with accent to national interests first and also some conservative values (religion, family.) doing the changes that are on the edge of political system of democracy. Election campaigns target is not the intellectual elite, but above all lower-educated voters, low-income groups, an electoral majority of these societies. Also for Poland it is possible to summarize, that there has been growing a significant imbalance between freedom and equality, there were seriously touched necessary conditions of democracy: split of political power in the state, electoral law, decentralization, protection of minorities, right to information and free media, protection of human rights and freedoms and, first of all, legal framework of the political

system. In December 2017 the European Commission proposed to the Council of EU adopt a decision under Article 7(1) of the Treaty on European Union so the Polish government has moved to the implementation of the Article, which can lead to a reduction in voting rights in the EU Council. The European Commission asserts that the Polish judicial reform undermines the independence of the judiciary and violates the fundamental legal principles of the Union. Currently, Hungary and Poland are also supervised by the Venice Commission of the Council of Europe.

Czech Republic has a modern history connected with Habsburgs, Germany and Russia, but unlike Hungary and Poland, has deep democratic and industrial tradition, as well as some anti-Catholic tradition; however it lacks strong nationalism and clericalism. The leadership tradition has rather ethical content. Populist parties ANO 2011 and SPD (Party of Direct Democracy) with strong leaders did not achieve a constitutional nor simple majority in the last election (2017) and the reality will be either minority government or hybrid coalition government or snap election. In the Czech Republic the necessary conditions of democracy has not been emptied yet although changes are reported by some parties as their goal.

The political developments evoke many questions with regard to the political culture and democracy in the Central Europe. Internal development of states showed in the last two decades fragmented political structure, the existence of extreme right-wing parties (particularly in Hungary and Slovakia), an unstable value structure, low respect to political institution (Gubová 2016), rather strong nationalism in Hungary, partly in the Slovakia and Poland, clericalism in Poland. There is still a lack of confidence in the EU, due to the asymmetry of large and small as well as asymmetry of old and new Member States. Post-communist past was last two decades the strongest connecting link between mentioned countries. There are invoked latent tendencies in the political culture – especially in Hungary and Poland - nationalism, clericalism, tendency to authoritarianism - that challenge necessary condition of political system of democracy.

#### **4. Conclusion**

Democracy, the basis for European integration during process of its development, becomes one of the main values of European Union (European Union Treaties, [online], 2018). Today we can recognize imbalance between the economic and political integration of the EU. Moreover, if some of country, although the EU member state, lacks a democratic tradition, it can be the source for restrictions on human rights and democratic freedoms, so limiting the necessary conditions of the political system of democracy, then it will allow authoritarianism. In the last two decades a development of some Central-European states showed fragmented political structure, the existence of extreme right-wing parties, unstable value structure, low respect to political institutions, thus tendency to leadership. The majority in parliament was than often an instrument for limiting elements of democracy in political system, namely as follows: change of public media to state media, restrictions on the activities of constitutional courts, changes in electoral systems or recount of votes to mandates, the emptying of democratic political freedoms. However, political equality is meaningless without political freedom, this leads to a retreat from democracy and a shift to authoritarian rule. This is, unfortunately, the direction of today's Poland and Hungary, similar attempts are visible also in Slovakia and the Czech Republic.

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### References

- [1] Almond, G.A. & Verba S. (1980). *The Civic Culture Revisited*. Boston: Newbury Park.
- [2] *Čeština 2.0* [online]. [cit.2018-02-22] <https://cestina20.cz/slovník/orbanizovat/>
- [3] Dahl, R. *Democracy and its Critics* (1989). New Haven: Yale University Press.
- [4] Fukujama, F. *End of history?* (1989) [online]. [cit.2018-02-22]. [https://www.embl.de/aboutus/science\\_society/discussion/discussion\\_2006/ref1-22june06.pdf](https://www.embl.de/aboutus/science_society/discussion/discussion_2006/ref1-22june06.pdf)
- [5] Gubová, O. (2016). Limits of Liberal Democracy in V4 Countries in Context of EU's Imbalance between Economic and Politic Integration. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 282-290
- [6] Havel, V. *Moc bezmocných* (1978) [online]. [cit. 2018 02-22] Available at: [http://www.ceskatelevize.cz/ct24/sites/default/files/1817870-vaclavhavel\\_moc\\_bezmocnych\\_1978.pdf](http://www.ceskatelevize.cz/ct24/sites/default/files/1817870-vaclavhavel_moc_bezmocnych_1978.pdf).
- [7] Hobsbawm, E. (2009). *Globalizace, demokracie a terorismus*. Praha: Academia.
- [8] Kornai, J. *Láttelelet: Tanulmányok a magyar állapotokról*. (2017) [online]. [cit.2018-02-22] <http://www.kornai-janos.hu/Kornai2017-Lattelelet.html>
- [9] Kornai, J. *U-Kanyar Magyarországon*. [online] (2015) . [cit.2018-02-22]. [http://www.kornai-janos.hu/Kornai\\_Hungary's%20U-Turn%20-%20full.pdf](http://www.kornai-janos.hu/Kornai_Hungary's%20U-Turn%20-%20full.pdf)
- [10] Kucharczyk J., Zbieranek J. (2010) *Democracy in Poland 1989-2009. Challenges for the future*. Warsaw: Fundacja Instytut Spraw Publicznych.
- [11] Lendvai, P. (2012). *Between democracy and authoritarianism*. New York: Columbia University Press.
- [12] *Maastricht Treaty on EU*, p.3 (1992) [online]. [cit.2018-02-22]. Available at: [https://europa.eu/europeanunion/sites/europaeu/files/docs/body/treaty\\_on\\_european\\_union\\_en.pdf](https://europa.eu/europeanunion/sites/europaeu/files/docs/body/treaty_on_european_union_en.pdf)
- [13] Orbán, V. *Prime Minister Viktor Orbán's Speech at the 25<sup>th</sup> Bálbányos Summer Free University and Student Camp, 2014, July 10<sup>th</sup>* (2014). [online]. [cit.2018-02-22]. <http://www.kormany.hu/en/the-prime-minister/the-prime-minister-s-speeches/prime-minister-viktor-orban-s-speech-at-the-25th-balvanyos-summer-free-university-and-student-camp>
- [14] Orbán, V. *Prime Minister Viktor Orbán's presentation at the 26<sup>th</sup> Bálbányos Summer Open University and Student Camp July 2015* (2015) [online]. [cit.2018-02-22]. <http://www.kormany.hu/en/the-prime-minister/the-prime-minister-s-speeches/prime-minister-viktor-orban-s-presentation-at-the-26th-balvanyos-summer-open-university-and-student-camp>
- [15] Svensson, P. (1995) *Teorie demokracie*. Brno, Centrum pro studium demokracie a kultury

## Are There Any Common Features of National Cultures of the Top Ten Sustainability Countries in European Union?

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### **Abstract**

*In the time when so much discussion appear on European integration, not only on economic, but also social and cultural level, we must bear in mind the differences that exist between individual European Union countries, their citizens, way of thinking, perception and understanding of different phenomena. This also applies to social responsibility concept differently implemented in EU Member States. The knowledge of the management staff of the characteristics of national cultures can significantly influence the success of the implementation of various managements concepts including social responsibility. In the paper the author analyses national culture dimension of the ten best scored EU countries in sustainability ranking. The four dimensions of national culture according to the Hofstede typology have been taken into account and some patterns have been found.*

**Keywords:** CSR, cultural dimensions, European Union, Hofstede typology, national culture

**JEL Classification:** M14, M16, F23

### **1. Introduction**

Culture can be defined as a set of shared values, assumptions, beliefs, morals, customs and other habits that are learnt through membership in a group, and that influence the attitudes and behaviours of the group members (Hofstede, 1984; Kluckhohn, 1954). The notion of culture exist at many different levels, including organizational, occupational groups, industries, geographical regions, and nations (Leung et al., 2005). National culture has a relevant impact on individuals within a society and the way they act and think. The culture of nations is recognized as fundamental determinants of differences between not only individuals but also organizations from different cultural backgrounds (Hofstede, 1984). Thus national culture plays an important role in forming and impacting corporate cultures within a specific nation, country or region (Thanetsunthorn, 2015). This may results in success or failure of the management concepts adopted by businesses in different regions, including Corporate Social Responsibility (CSR) concept.

The European Union's strategy clearly demonstrates that the positive development of the European economy is closely related to Europe's companies embedding corporate responsibility into practice. In order to facilitate this process, the EU has been creating a political framework and promoting the debate on CSR since 2000. The European Union has been one of the most active entities concerned with the promotion of corporate social responsibility. The implementation of the concept is supported by the EU through many diverse initiatives and strategic documents, which recognize the concept of CSR as a way for

achieving sustainability, competitiveness, and innovation of EU enterprises as well as the EU economy (Adamek, 2016).

As there is still no consensus about the CSR definition and associated business obligations resulting from its implementation the interpretation of the CSR concept and its practice differs according to the context in which the enterprises operates (Hill et al. 2007; Kołodziej and Maruszewska, 2015). The study on the practices of CSR in different EU countries also concludes that the governments and businesses in Europe have different perceptions on CSR and in fact European Union is characterized by a high diversity of combinations of CSR models (Iamandi, 2011). Although there is one EU policy framework on CSR, the concept is implemented differently across EU Member States. The focus of the paper is on the cultural context as factor influencing development of CSR activities. Therefore the aim of this paper is to analyse cultures of the top ten sustainability countries in EU and to identify any cultural patterns which might influence the successful CSR implementation.

The rest of the paper is structured as follows. The next section provides brief overview of EU policy supporting CSR and pay attention to cross-national differences in CSR performance. This is followed by a section dedicated to methodology used in the research process. Then the research findings are presented and the paper ends with conclusions.

## 2. Corporate Social Responsibility at the European Union Level

The European Union policy support for corporate social responsibility concept began with the development of the so-called Green Paper on CSR (Adamek, 2016). In July 2001, the European Commission announced “*Green Paper. Promoting a European Framework for Corporate Social Responsibility*” (COM, 2001), document systematizing the concept of corporate social responsibility at the European level. After the publication of the Green Paper, as the result of the consultation process was released a new document - a strategy for implementation and dissemination of corporate social responsibility. The so-called White Paper. Communication on CSR was published on July 2, 2002 under the name “*Corporate Social Responsibility: A Business Contribution on Sustainable Development*”. Another official paper referring to the issue of corporate social responsibility on EU level is the new strategy Europe 2020 (COM, 2010) which mentions the necessity to resume the EU strategy promoting corporate social responsibility. The next step of the undertaking actions by the European Commission was presenting in 2011 the Communication “*A renewed EU strategy for 2011-2014 regarding corporate social responsibility*”. An important part of the EU policy focused on CSR and improved transparency of business activities was also entry into force the directive on non-financial reporting (Directive 2014/95/EU) which sets out the contours of the reporting obligations concerning non-financial information applicable to a certain category of companies (Hąbek and Brodny, 2017).

Despite the numerous examples of CSR support a recent study prepared for the European Commission demonstrates that the EU’s policy on CSR needs to be supported and improved more in order to reach its targets (Schimanski, 2013). According to this study, only 33 percent sampled EU companies refer to at least one of the UN Global Compact, the OECD Guidelines or ISO 26000 standard, although 75 percent of the Danish companies and more than half of Spanish and Swedish companies refer to internationally recognized CSR instruments more often than the average EU company. Dutch, French and Italian companies were about average in the sample, whereas only less than 15 percent of Czech, German, and Polish companies in the sample refer to CSR instruments (Schimanski, 2013). Although the uniform policy on CSR at the EU level, the concept is implemented differently in individual Member States. Comparative cross-national CSR research supports that CSR performance varies across

countries, and that a company's nationality is important factor that influence the CSR approach (Ringov and Zollo, 2007). Comparative CSR studies explains cross-national differences in CSR performance as a function of difference in political-economic institutions, such as the welfare state, labour unions, educational systems or financial systems. These institutions represent a country-specific framework for companies that impacts on the implementation of CSR (Gjørberg, 2010). The divergences concerning the implementation of CSR in Europe derive also from the lack of common global definition and different understandings that shape the perception and practices of CSR. This all makes CSR's interpretation conditional and relative because it develops over time, in different contexts (Argandona and Hoivik, 2009). A common European framework or a definition on CSR is lacking since the developments and implementation in the member states are diversified depending upon the different historical, cultural, political and socio-economic factors which play a decisive role in conceptualization of CSR (Argandona and Hoivik, 2009). Thus it can be stated that there is no single European Union model of CSR approach but several. According to Argandona and Hoivik there can be identified five models with significant contextual differences: Anglo-Saxon, Central-European, Scandinavian, Mediterranean, Central and Eastern European. This contextual differences refer also to variety of national cultures existing in EU Member States. National culture is something very abstract and has direct impact on the thoughts and behaviours of people who are members of that nation. The same behaviour, which in one culture is perceived as positive, in another can be described as negative. Having the same national cultural background can cause that people could have similar thoughts and behaviours towards the same things or phenomena. According to Hofstede culture is "the collective programming of the mind which distinguishes the members of one group or category of people from another" (Hofstede, 1991), or in other words, culture is what almost every members of a certain group have in common and by which they could distinguish themselves from other groups. It is assumed that each culture is characterized by an individual specificity that makes various management concepts easy to implement, or, on the contrary, that their implementation encounters significant resistance (Hofstede, 1984). As stated by Hofstede "management within a society is very much constrained by its cultural context, because it is impossible to coordinate the actions of people without a deep understanding of their values, beliefs, and expressions". Therefore being aware of cultural context of the country where the company operates is of high importance for managers as companies may achieve higher performance when their management practices are matched with national cultures (Halkos and Skouloudis, 2016). This also applies to CSR concept especially at a time of increasing globalisation and activities of multinational corporations. The author in the paper seeks for the specific features of the national culture which may support CSR implementation by analysing national culture dimensions of the top ten sustainability countries in European Union.

### 3. Methodology

The analysis of the cultural dimensions of the top ten sustainability countries in EU was based on secondary data and is a result of a descriptive research approach. To evaluate national culture it is necessary to use a quantitative scale based on specific indicators. In this paper the national culture is defined by means of Hofstede's cultural dimensions model including Power Distance (PD), Individualism (IDV), Masculinity (MAS) and Uncertainty Avoidance (UA) dimensions. Hofstede established the differences between cultures by assigning each dimension and country a score on a 0-100 scale. The choice of using the Hofstede typology is justified as it is widely accepted and often used by researchers studying the relationship between CSR and national culture (Ringov and Zollo, 2007; Thanetsunthorn, 2015). The values of indexes for the countries were obtained from the Hofstede Insights website -

<https://www.hofstede-insights.com/>. The choice of the best sustainability countries in European Union was based on the country sustainability ranking carry out by RobecoSAM and Robeco. As of October 2017 the top ten sustainability countries in EU was Sweden, Finland, Denmark, Netherlands, Ireland, UK, Luxembourg, Germany, Austria, Czech Republic.

#### 4. Problem Solutions

After collecting data from RobecoSAM and Robeco sustainability country ranking it turned out that the top ten sustainability countries in EU are within the world top twenties sustainability countries. Looking at the position in the world ranking of the top 10 EU countries, the biggest difference in the ranking positions can be found between the last and the second to last position and concerns Austria and Czech Republic (see Table 1).

Data referred to the national cultural dimensions indicate that the top 10 sustainability countries in EU is characterized by low Power Distance and Individualistic culture. In terms of Masculinity and Uncertainty Avoidance dimensions it can be noticed differences among the studied countries. Because of the fact that national culture of almost all of the top ten sustainability countries in EU is characterized by low Power Distance dimension (except Czech Republic) and in order to observe some common patterns in national cultures, figures 1 to 3 present comparisons of scores of the Power Distance and the other three cultural dimensions.

**Table 5: The Culture Dimensions of the Top 10 EU Country Sustainability Ranking**

Country	Position at the world ranking	Power Distance	Individualism	Masculinity	Uncertainty Avoidance
Sweden	1	31	71	5	29
Finland	2	33	63	26	59
Denmark	4	18	74	16	23
Netherlands	9	38	80	14	53
Ireland	10	28	70	68	35
UK	11	35	89	66	35
Luxembourg	12	40	60	50	70
Germany	13	35	67	66	65
Austria	15	11	55	79	70
Czech Republic	19	57	58	57	74

Source: based on Country Sustainability Ranking – <http://www.robecosam.com> and Hofstede Insights calculator - <https://www.hofstede-insights.com> (2018)

When comparing Power Distance and Individualism dimensions (Figure 1) it can be stated that national culture of all of the top ten sustainability countries is characterised by Individualistic rather than Collectivistic culture. In Individualistic culture the good of individual is more important to us than good of a group, people attach more importance on personal self-interest and value their personal time, freedom and independence. In an high Individualistic culture, ties between individuals are loose and individuals stress the primary responsibility for their own action. From the group of the top ten the highest individualistic culture is the one of UK

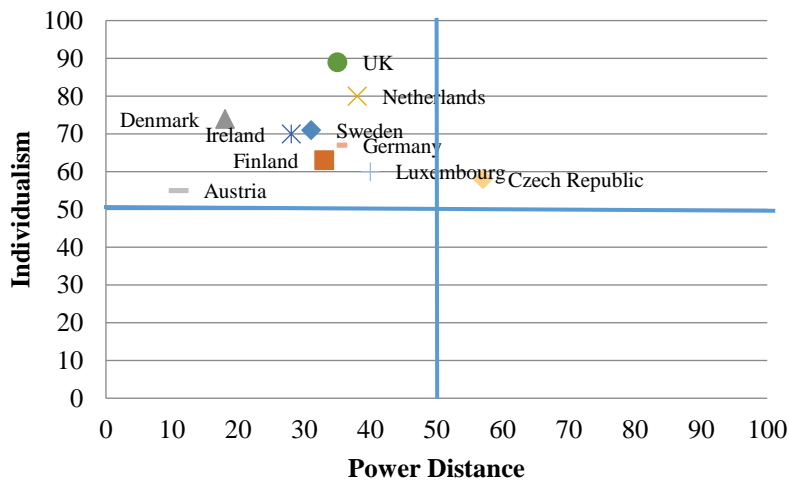


and the Netherlands and moderate Individualistic culture is represented by Czech Republic and Austria.

Taking into account Masculinity dimension (Figure 2) it can be seen large variation in the results of the top ten sustainability countries in EU. It can be found countries with high Masculinity cultures such as Austria as well as very low masculinity (femininity) country such as Sweden. Masculinity dimension means a preference in society for achievement, heroism, assertiveness and material success. Its opposite, Femininity, means a preference for relationships, modesty, caring for the weak, and the quality of life (Hofstede, 1984). If we assume score of 50 as a border between the culture dimensions, the ten studied countries can be divided into two groups of countries. These which represent masculinity type of national culture (Czech Republic, Germany, UK, Ireland and Austria) and those which represent Femininity type of national culture (Sweden, the Netherlands, Denmark and Finland) and one country in the middle of the scale – Luxembourg.

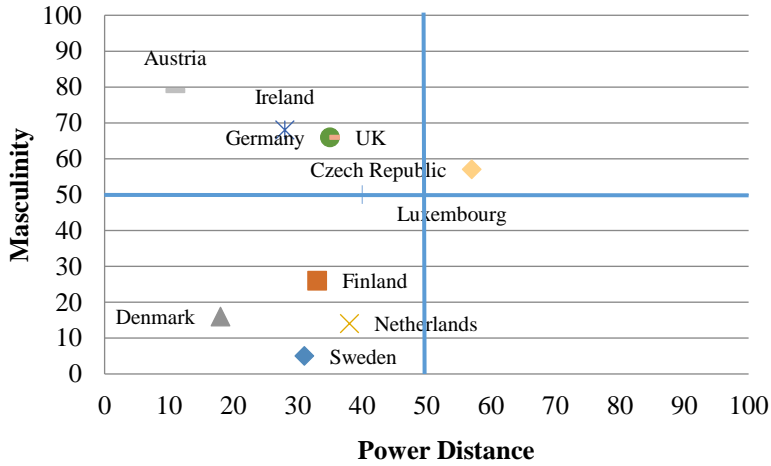
The similar situation can be observed in the case of Uncertainty Avoidance dimension (see Figure 3). The top ten sustainability countries in EU can be grouped into high and low uncertainty avoidance cultures. Uncertainty Avoidance is the degree to which the members of a society feel uncomfortable with risky and ambiguous situations. Individuals in societies with a high score on Uncertainty Avoidance dislike and feel uncomfortable with uncertain and ambiguous situations. They prefer rigid codes of conduct, strict laws, and regulations to minimize the uncertainty. On the other hand, individuals in societies with a low score on Uncertainty Avoidance tend to have flexible attitudes and behaviours (Hofstede, 1991). Analysing the case of top ten sustainability countries in EU we can observe rather moderate Uncertainty Avoidance dimension, without extreme differences in values of the scores. The countries with low Uncertainty Avoidance cultures are Denmark, Sweden, Ireland, UK. The second group are the countries with high Uncertainty Avoidance: Czech Republic, Austria, Luxembourg, Germany, Finland, the Netherlands.

**Figure 2: National Culture Dimensions of the Ten Top Sustainability Countries in EU (Power Distance Versus Individualism)**



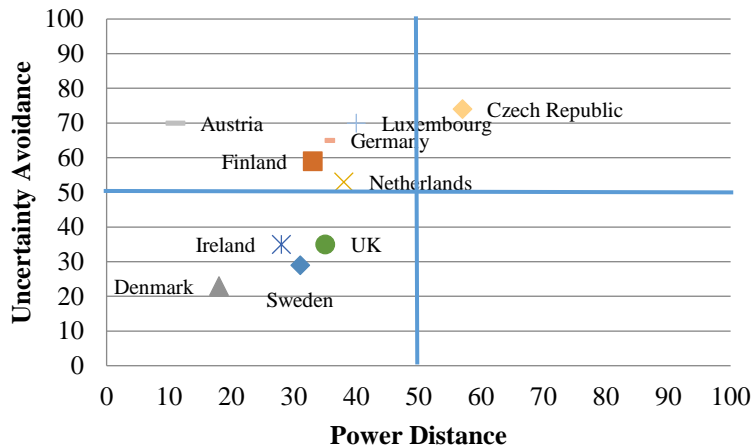
Source: based on data collected from Hofstede Insights calculator – <https://www.hofstede-insights.com> (2018)

**Figure 3: National Culture Dimensions of Ten Top Sustainability Countries in EU (Individualism Versus Masculinity)**



Source: based on data collected from Hofstede Insights calculator – <https://www.hofstede-insights.com> (2018)

**Figure 4: National Culture Dimensions of Ten Top Sustainability Countries in EU (Power Distance Versus Uncertainty Avoidance)**



Source: based on data collected from Hofstede Insights calculator – <https://www.hofstede-insights.com> (2018)

After analysing all dimensions of national culture of the top ten sustainability countries in EU it can be noticed some patterns that may support CSR implementation. The national cultures of the studied countries are characterised by low Power Distance (except Czech Republic) and Individualistic culture. The other two dimensions - Masculinity and Uncertainty Avoidance not seem to be of great importance in encouraging EU countries in CSR activities. Among the top ten sustainability countries in EU can be found Member States with cultures characterized by Masculinity and Femininity as well as countries with high and low Uncertainty Avoidance cultures.

## 5. Conclusions

Companies do not operate in isolation. Managers run their business in a complex environment which influence their decisions and a way they lead the business. When implementing a management concept the culture context is of high importance because it may shape the understanding of this concept. The situation will not be different in case of corporate social responsibility idea. People from different cultural backgrounds will have different perceptions of the roles corporations should play in terms of social responsibility. Therefore cultural differences between countries cannot be ignored when implementing management concepts and it is especially challenging issue for multinational companies. Managing across borders require applying customized CSR strategies in different countries taking into account every cultural context they operate in. Apart from the same political framework on CSR at European Union level there are differences in CSR performance in individual Member States. Therefore searching for similarities of national cultures of the ten best sustainability Member States seems to be of crucial importance. The results reveal similarities in two dimensions of national cultures. All analysed countries are characterised by low Power Distance culture, except Czech Republic with the score a little above the border of 50 on the Hofstede scale. The second national culture dimension which is in common for all of the top ten EU Member States is the dimension of Individualism. It may be stated that low Power Distance and Individualistic cultures may create favourable context for development of CSR activities in EU. It must be noted here that nowadays national cultures' often consist of a range of regional cultures and sub cultures. Therefore we must be cautious when analysing cultural dimensions and treat them as framework for further discussions about cultural similarities or differences especially in a time when in one company we can meet employees representing different national cultures.

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## References

- [1] Adamek, P. (2016). Consequences of Corporate Social Responsibility Approach in Voluntary European and Global "Responsible" Initiatives. In *Proceedings of the 3rd International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, pp. 19–27.
- [2] Argandona, A. and Hoivik, H.W. (2009). Corporate social responsibility: One size does not fit all collecting evidence from Europe. *Working Paper 834*. IESE Business School.
- [3] COM (2001). *Green Paper. Promoting a European Framework for Corporate Social Responsibility* [online]. [cit.2017-12-14]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=URISERV%3An26039>
- [4] COM (2010). *Europe 2020: the European Union strategy for growth and employment* [online]. [cit.2017-12-14]. Available at: <http://eur-lex.europa.eu/legal-content/BG/TXT/?uri=uriserv:em0028>

- [5] Gjølborg, M. (2010). Varieties of corporate social responsibility (CSR): CSR meets the “Nordic Model”. *Regulation and Governance*, vol. 4, iss. 2, pp. 203–229.
- [6] Hąbek, P. and Brodny, J. (2017). Corporate Social Responsibility Report – An Important Tool to Communicate with Stakeholders. In *4th International Multidisciplinary Scientific Conference on Social Sciences and Arts*. Albena, Bulgaria, pp. 241–248.
- [7] Halkos, G. and Skouloudis, A. (2016). Cultural dimensions and corporate social responsibility: a cross-country analysis. *MPRA Paper 69222*. Munich: University Library of Munich.
- [8] Hill, R.P., Ainscough, T., Shank, T. and Manullang, D. (2007). Corporate social responsibility and socially responsible investing: a global perspective. *Journal of Business Ethics*, vol. 70, issue 2, pp. 165–174.
- [9] Hofstede, G. (1984). Cultural dimensions in management and planning. *Asia Pacific Journal of Management*, 1, pp. 81-99.
- [10] Hofstede, G. (1991). *Cultures and organization: Software of the mind*. London: McGraw-Hill.
- [11] Iamandi, I. (2011). The application of corporate social responsibility models in Romania in the context of the post-accession to the European Union. *Economy Transdisciplinary Cognition*, vol. 14, iss. 1, pp. 25–46.
- [12] Jonek-Kowalska, I. and Zieliński, M. (2017). CSR Activities in the Banking Sector in Poland. In *29th International-Business-Information-Management-Association Conference*. Vienna, Austria, pp. 1294–1304.
- [13] Kluckhohn, C. (1954). Culture and behavior. In Lindzey, G. (ed.). *Handbook of social psychology*. Cambridge, MA: Addison-Wesley, pp. 921–976.
- [14] Kołodziej, S. and Maruszewska, E.W. (2015). Economical Effectiveness and Social Objectives in Corporate Social Reports – A Survey Among Polish Publicly Traded Companies. In: *2nd International Multidisciplinary Scientific Conferences on Social Sciences and Arts*. Albena, Bulgaria, pp. 161–167.
- [15] Leung, K., Bhagat, R.S., Buchan, N.R., Erez, M. and Gibson, Ch.B. (2005). Culture and International Business: Recent Advances and Their Implications for Future Research. *Journal of International Business Studies*, vol. 36, iss. 4, pp. 357–378.
- [16] Ringov, D. and Zollo, M. (2007). Corporate responsibility from a socio-institutional perspective. The impact of national culture on corporate social performance. *Corporate Governance: The International Journal of Business in Society*, vol. 7, iss. 4, pp. 476–485.
- [17] Schimanski, C. (2013). *An Analysis of Policy References made by large EU Companies to Internationally Recognised CSR Guidelines and Principles*. European Commission [online]. [cit.2018-01.21]. Available at: <https://business-humanrights.org/en/pdf-an-analysis-of-policy-references-made-by-large-eu-companies-to-internationally-recognised-csr-guidelines-and-principles>
- [18] Thanetsunthorn, N. (2015). The impact of national culture on corporate social responsibility: evidence from cross-regional comparison. *Asian Journal of Business Ethics*, vol. 4, iss. 1, pp. 35-56.

## **Regulation of Czech Accounting and Taxes in the Context of European Accounting, Taxes and Ongoing International Harmonization**

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### **Abstract**

*The regulation of Czech accounting, reporting and taxation has undergone major changes in the recent years, in line with the ongoing international harmonization. The result should be transparent, comparable and relevant accounting and tax information, which should contribute to the long-term objectives of the European Union. Every year, the Czech accounting and tax legislation undergoes number of significant changes which bring the Czech legislation closer to the European concept. The paper deals with this issue in connection with the new concept of accounting for the period of 2020-2030, which is being prepared by the Ministry of Finance of the Czech Republic. The upcoming changes in accounting are also connected with a major amendment to the Income Tax Act, which represents a shift of accounting away from the taxation and a reduction in existing interconnections. These changes will, among other things, have a significant impact on the increase of tax neutrality, reduction in the administrative burden, simplification of the structure of accounting and tax legislation while respecting European legal norms.*

**Keywords:** *accounting, European regulations, European Union, international harmonization, taxes*

**JEL Classification:** *H25, K34, M40, M41*

### **1. Introduction**

In line with economic globalization, international harmonization, regulatory conditions and requirements of the EU for reporting and a changing view of the relationship between accounting and taxation, accounting and tax information should be provided in the Czech Republic in a transparent and comparable manner. Any ongoing changes as well as changes that are being prepared for the period of 2020-2030 should contribute to achieving the long-term objectives of the European Union. This paper aims to analyse and evaluate the process of harmonization, both for accounting and taxation, in connection with binding European legislation. Another aim of the paper is to analyse the upcoming concept of accounting for the period 2020-2030, which is under the auspices of the Ministry of Finance of the Czech Republic (hereafter only MF CR). The upcoming changes in accounting and taxation are expected to have a significant impact, among other things, on improving stability and maintaining fiscal neutrality, reducing administrative burden, simplifying the structure of accounting, tax and legal regulations and to bring overall simplification of accounting and tax

legislation in the Czech the Republic, while respecting the globalization trends and European harmonization requirements.

## **2. Problem Formulation and Methodology**

Methods used in this paper match its content and focus. This is primarily the method of description. A dialectical benefit, for which each phenomenon can be understood as a part of the whole, can be considered as a methodological basis. Individual economic categories and economic phenomena are not examined in isolation but are based on principles of integrity of economic phenomena and the principle of dialectical unity. Furthermore, the method of procedure was used, which comes from simple categories to their increasingly complex determination, to their mutual relations. The methods of analysis and comparison were also used. The findings are summarized using the method of synthesis and scientific explanation.

## **3. Regulation of Czech Accounting and Taxation from the View of Ongoing Globalization and International Harmonization**

Since 1 January 2016, the Czech Republic has already made steps towards bringing the accounting of business entities closer to International Financial Reporting Standards. The Czech accounting has been harmonized in accordance with EU directives and regulations. Harmonization and globalization trends led to the modernization of accounting procedures, changes in valuation, bookkeeping and especially reporting, so that the financial statements would be prepared in a comprehensible manner and give a true and fair view of the entity's accounting and financial position and thus be comparable to the financial statements of the business entities within the EU. Taxation is another area concerned, where a relatively strong harmonization is taking place. The harmonization with EU regulations currently affects not only direct taxes but also indirect taxes, where significant steps have already been taken to respect the harmonization requirements.

### ***3.1 Harmonization of Czech Accounting Regulations in 2016-2018***

The main benefits of harmonization include mainly the comparability of financial information at the international level. This comparability eliminates current misunderstandings regarding the reliability of foreign financial statements and removes one of the most important barriers to international investment flows (Hakalová, Pšenková, Losová, 2014). The year 2016 brought a number of significant changes in the accounting of business entities in the Czech Republic (hereafter only CR). The reason for that was the transposition of the accounting directive 2013/34/EU and the effort to modernize accounting procedures and bring them closer to International Financial Reporting Standards (hereafter only IAS/IFRS).

The directive 2013/34/EU of the European Parliament and of the Council brought the need to amend the Act on Accounting No. 563/1991 Sb. (hereafter only Accounting Act) and other related accounting regulations, which include Decree No. 500/2002 Sb. and Czech Accounting Standards with effect from 1 January 2016. This relatively extensive amendment of statutory accounting regulations brought a number of new things.

One of the most important ones was the introduction of a new categorization of accounting entities (micro, small, medium-sized and large). The categorization of the entity is determined by achieving or exceeding at least two of the three criteria (the value of total assets - net, net turnover and average number of employees) at the balance sheet date, see Table 1. This fact is

also basis for different accounting obligations. It concerns mainly the content of financial statements and annual report, the preparation of consolidated financial statements, audit of financial statements, disclosure obligation, and other things (Hakalová, Palochová, Pšenková, 2016).

**Table 1: New Categorization of Accounting Entities Since 1. 1. 2016**

Accounting entity category	Turnover (million CZK)	Assets (million CZK)	Number of employees
Micro	up to 18	up to 9	up to 10
Small	up to 200	up to 100	up to 50
Medium-sized	up to 1,000	up to 500	up to 250
Large	over 1,000	over 500	over 250

Source: Act No. 563/1991 Sb., on Accounting, custom processing

Entities which are Public Interest Entity and Selected Accounting Entity are always considered to be a large accounting entity. The amendment to the Accounting Act affected changes in the content of financial statements, the obligation of their disclosure and also brought a new definition of the purpose of financial statements, which is to provide information for economic decision making of external users. This purpose should be a priority for the accounting entity when choosing accounting methods and procedures (Kolektiv autorů, 2016).

According to the new categorization, large and medium-sized entities, in addition to the balance sheet, profit and loss statement and the notes, must also prepare a statement of cash flows and statement of changes in equity; this change relates to the harmonization of Czech accounting legislation with IAS/IFRS. However, small and micro accounting entities are not obliged to prepare the statement of cash flows or the statement of changes in equity. Pursuant to Section 21 of the Act No. 563/1991 Sb. on Accounting, annual report is prepared only by accounting entities that are required to have their financial statements audited under Section 20 of this act. The annual report provides information on the development of company's performance, activity and current economic position. It also contains financial and non-financial information. The Amendment to the Accounting Act brought a relief for micro, small and medium-sized accounting entities that are not obliged to report non-financial information in the annual report.

Although there was a large-scale amendment in 2016, which affected all accounting regulations, it was only a transfer of obligatory (mandatory) provisions. The year 2018 brought another step towards the International Financial Reporting Standards, when it was necessary to transpose the optional (voluntary) provision from the Directive 2013/43/EU of the European Parliament and the Council. This effort brought a number of legislative changes, for example in reporting research and development results, retained earnings and losses of previous years, accruals and deferrals, and also in the accounting method of goodwill amortization and terminological clarification and alignment with EU regulations.

### **3.2 Harmonization of Czech Tax Legislation in 2016-2018**

Since the Czech Republic joined the European Union in 2004, the Czech tax legislation has undergone and is still undergoing number of significant changes, especially in the area of indirect taxes, namely the value added tax. The European Union's single market must work in the same way as the domestic market. The differences between domestic and intra-Community transactions must therefore be eliminated so that entities can limit themselves to only two valid

tax systems, namely intra-EU transactions and transactions with third countries. The logical consequence of processing intra-EU transactions in the same way, as if they occurred in one member state, was the introduction of a single place of taxation.

In the area of indirect taxes, the harmonization process in the Czech Republic focuses not only on value added tax but also excise taxes (octroi) every year. The main direction of harmonization is aimed at balancing individual rates so that domestic products are not favoured by lower or zero tax rates, and the EU single market and economic competition within the EU are not jeopardized.

The Harmonization of direct taxes is entirely different and does not take place in such proportions and to such an extent as for indirect taxes. The reason for that is that direct taxes have a completely different character than indirect taxes. They affect the decision-making on investment activity, formation of trading companies, development of new jobs and thus the employment growth. They also impact the pension of every Czech citizen and entrepreneur. The harmonization of personal income tax is therefore not expected to a greater extent, since such harmonization is not necessary for the proper functioning of the internal market, with the exception of measures for non-residents, especially cross-border workers. Corporate taxes are supposed to help to free capital, not to cause harmful competition between countries. It is for this reason that the harmonization of direct taxes is progressing very slowly throughout the European Union, where it is not even a priority.

The issue of harmonizing direct taxes in EU countries is also often not politically viable. The harmonization process in this area is stagnating mainly due to the differences in accounting systems of individual member states and further due to member states' reluctance to further harmonization, which they regard as interference with sovereign affairs of their internal policies.

As for other direct taxes, namely real estate tax, real estate acquisition tax and road tax, the situation is similar to that of personal and corporate income tax. Harmonization of these taxes is also not among current policy objectives of the European Union, therefore it is only minimal, and it is not given such attention as is given to indirect taxes. The process of tax administration harmonization has advanced the least (Kopřiva, 2011).

Thus, it can be stated that both value added tax and excise duty achieved high levels of harmonization in the Czech Republic at the present time. Value added tax, as a universal general harmonized tax, is currently perceived as a matter-of-course and necessity for the operation of the common market. For VAT, however, each country has different rates that are based on minimum rates set by EU rules, a different classification of individual items, etc. Value added tax is the most harmonized tax in the united Europe though. Even so the harmonization of Czech tax rules cannot be regarded as successful in all respects. The reverse is true as there are some negatives that cannot be ignored. These, for example, include the considerable lack of clarity and complexity of the legal regulation of the Act on Value Added Tax, which is almost immediately obvious to the general public after seeing the ever-changing act.

Basic objectives of the tax policy in the European Union, which are set out in the document "Tax policy in the European Union - Priorities for the years ahead", should be fulfilled during the harmonization process. These are the three major political objectives:

- national tax systems should be more transparent and simple,
- contributing to the effectiveness of the intra-Community market,
- shifts to lower rates and broader bases.



### **3.3 New Concept of Accounting and Taxation in the Czech Republic in 2020-2030**

In the Czech Republic, there are now again talks about preparatory works in relation to the brand new concept of accounting legislation for 2020-2030. Given that the Accounting Act and related accounting regulations are one of the laws with longest period of validity in the Czech Republic, it is desirable to change the accounting legislation and adapt it to the current needs of the national legislation, especially to international requirements in the context of world globalization.

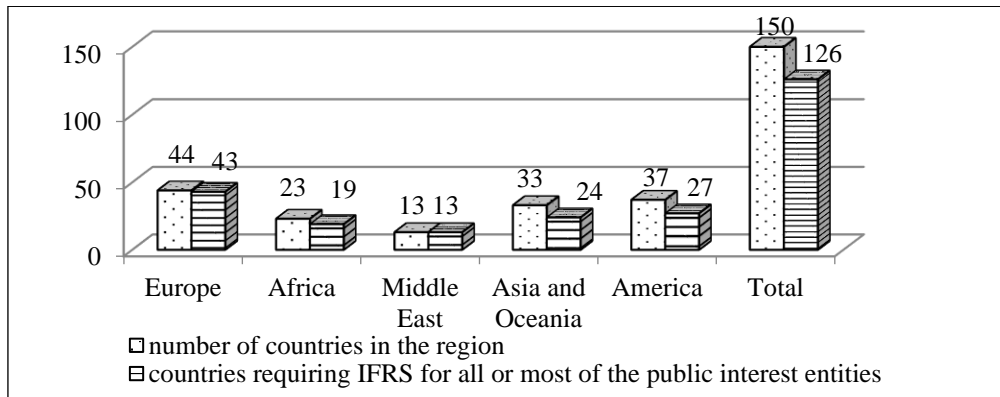
The main reasons for the requirement to amend the Accounting Act and subsequent decrees and standards include in particular the following:

- considering world globalization and the requirement for comparability of statements based on national accounting legislation, the accounting ceases to be a national domain; users are globalising, and the world globalization brings the need to adapt national legislation to valid IAS/IFRS,
- as a member of the European Union, the Czech Republic is subject to its accounting regulation and is obliged to adapt to European directives,
- there are constant changes in regulatory conditions and requirements for world-wide reporting in particular,
- IFRS (International Financial Reporting Standards) was adopted as a global financial reporting standard,
- there has been a significant recodification of civil and commercial law, which changes the terminology used so far, and there is a need to adjust the legislation,
- and most importantly, the view of the relationship between accounting and taxation is currently changing (MF ČR, 2016).

In 2016, the Ministry of Finance of the Czech Republic already set the basic goal to revise the current state of the legislation on accounting and then to prepare a new concept of the Czech Republic for the next decade and ensure its implementation. Accounting and reporting requirements for small business and non-business entities should be minimized, but for large corporations, the existing world globalization determines the need for the application and greater utilization of IFRS in particular.

*There are currently three major lines of international accounting harmonisation. This is a case of the International Financial Reporting Standards (IFRSs), Accounting Directives of the European Union and Generally Accepted Accounting Standards of the United States of America (U.S. GAAP). International Financial Reporting Standards (IFRSs) are a set of standards, which are issued by the International Accounting Standards Board, governing the compilation and presentation of all financial statements (Hakalová, Pšenková, Losová, 2014).*

The system of IAS/IFRS is largely focused on the output of an accounting – financial statement (Krajňák, 2014). According to statistics of IASB (International Accounting Standards Board), the number of countries using IFRS is already 150, and all G20 countries are included. IFRS is used the most in Europe (44 countries), see Figure 1.

**Figure 1: Overview of the Number of Countries Where IFRS is Used (required)**

Source: Zelený (2017) – own processing

As you can see from Figure 1, 126 countries (84% of the total 150 countries where IFRS is used) already require IFRS for all or most of the domestic publicly traded companies or other public interest entities (listed companies and financial institutions). The 150 countries involved include all 31 member states of the European Union (EU) and the European Economic Area (EEA) where IFRS is required for all companies whose securities are traded on the regulated market. 126 countries classified as requiring IFRS for all or most of the domestic public interest entities include the member states of EU and EEA (Zelený, 2017).

The legislators and professional public are also currently discussing the use of IFRS for the purpose of determining the corporate income tax base, and this new concept is one of the possible reasons for the expected change in the Czech Income Tax Act in the context of the need for such harmonization. The tax harmonization is an essential part of the European integration. For this reason as well, accession of the Czech Republic into the European Union meant a significant change in tax policy (Krajňák, Krzikallová, 2016).

The Ministry of Finance of the Czech Republic is currently considering the preparation of a completely new concept of the Income Tax Act, which would be conceived as two separate norms. The first one would concern the taxation of companies and the second one self-employed individuals. This is mainly due to the fact that corporate taxation is slowly starting to harmonize with European directives, as opposed to the taxation of individuals, which will always be only national matter. For more information about tax harmonization within the European Union see e.g. (Randová, Krajňák, Friedrich, 2013).

The main changes of the new concept of the Act No. 586/1992 Sb., On Income Tax, include simplifying the legal norm without any impact on tax liability, improving stability and maintaining fiscal neutrality, as well as changes that would make the act more user-friendly, and other things. The act itself is to be purified from all exceptions and sectoral policies and should not include any parameters (i.e. not even a tax rate). A catalogue of standardized exceptions is to be added to the act, from which the minister will be able to select his program priorities. As for the personal income tax, it is expected that by 1 January 2019, the super-gross wage and solidarity tax increase will be abolished. Instead, the proposal of MF CR expects the introduction of a progressive tax rate of 19% for incomes up to 1.5 million CZK and 24% for incomes exceeding this amount. The proposed income tax rate of 19% is 1.1% less than the current tax burden (20.1%). Along with the abolition of the super-gross wage, the MF CR also proposes to abolish the so-called solidarity tax increase stated in Section 16a of

the Income Tax Act, and the introduction of another tax rate of 24%, an equivalent to today's effective rate, for the corresponding income exceeding approximately 4 times the average wage (MF ČR, 2018). Furthermore, the introduction of the so-called integrated system for managing taxes, social and health insurance, which should bring an advanced collection of both taxes and contributions at one place. A large amount of unnecessary and complex administrative activities should be automated or transferred to electronic communications.

#### 4. Conclusion

The harmonization steps taken during 2016-2018 brought clarity to the reporting and valuation of selected items of financial statements, which again brought the Czech accounting legislation closer to International Financial Reporting Standards. The present Accounting Act in some parts meets the needs of the practice, but some important areas are completely absent and its arrangement is, in fact, unsatisfactory, which is also true for its implementing regulations (decrees and Czech accounting standards). The new upcoming act, which should be in force in 2020, should bring many new things and improvements, and, above all, should respect the globalization and harmonization trends, regulatory conditions and requirements of the EU and take into account the changing relationship between accounting and taxation.

The tax policy has been, was and always will be a symbol of the national sovereignty of each state. This autonomy remains in its general features also in the European Union. For the functioning of the single market, however, the development of European integration requires close cooperation between countries in the area of taxation, whether in the form of information exchange, harmonization or at least coordination of tax systems. Tax co-operation has already been stipulated in the founding treaties of the European Community and is constantly expanding (Šíroký, 2013).

The often complicated process of adopting tax-related legislative acts, efforts to preserve national specificities and tax traditions, negotiations to maintain certain tax benefits lead to a complicated state of affairs and a lack of clarity in tax issues in the European Union.

A tax is income in public budgets, where it in the form of a mandatory and usually regularly recurring payment withdraws a portion of the entity's nominal income on an irreversible basis. The Income Tax Act is one of the most important instruments of public finances, not only from the point of view of the tax system, but also from the point of view of the revenue volume flowing to public budgets. The taxes so represent a major source of public sector financing and have both a microeconomic and a macroeconomic dimension. The basic principles necessary for the functioning of the market economy, namely the principle of tax neutrality and tax universality, have been strengthened. The new tax conception, which is expected to be in force from 2019 to 2020, eliminates some non-systemic institutes that make the Czech tax system unclear and obscure the real rate of taxation. A public debate is currently taking place on the whole concept of the new Income Tax Act draft. The proposed concept has, of course, both its positives and negatives. Against this new concept speaks the fact that part of the related Act on the Income Tax overlaps and could lead to a problem of a different interpretation of various sections that up to now have been part of the same act. Professional organizations, such as the Chamber of Tax Advisers, as well as business associations and the public, support the new version of dividing the act into two norms, mainly because of the difference between small businesses and large corporations (MF ČR, 2016 a 2018). The question to be discussed is whether the legislators manage to prepare a legislative concept that would be consistent with all intentions as well as regulatory requirements of the EU and also be acceptable to taxpayers.

## References

- [1] Act No. 563/1991 Sb., on Accounting, as amended.
- [2] Act No. 586/1992 Sb., on Income Tax, as amended.
- [3] Čížek, L. (2018). Změny v účetnictví od 1. 1. 2018. *Účetnictví*, vol. 1, pp. 11-15.
- [4] Hakalová, J., Palochová M. and Pšenková, Y. (2016). Further Steps to Harmonize the Accounting of Business Entities in the Czech Republic with the International Financial Reporting Standards - News from 2016. *Transactions of the Universities of Košice*, vol. 1, pp. 22-27.
- [5] Hakalová, J., Pšenková Y. and Losová, M. (2014). First-time Adoption of International Financial Reporting Standards for Business Corporations Based in EU Member State that Are Issuers of Securities Admitted to Trading on Regulated Market. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 192–201.
- [6] Kolektiv autorů. (2017). *Meritum Účetnictví podnikatelů*. Praha: Wolters Kluwer.
- [7] Kopřiva, J. (2011). *Harmonizace daní v Evropské unii*. Disertační práce.
- [8] Krajňák, M. (2014). IAS/IFRS as One of the Tools of Accounting Harmonization in the European Union. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 372–381.
- [9] Krajňák, M. and Krzikallová, K. (2016). Application of Decision Analysis at Trading of Goods in the Selected European Union Member State. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 497–506.
- [10] MF ČR (2016). Press release [online]. [cit.2016-06-27]. Available at: <http://www.mfcr.cz/cs/aktualne/tiskove-zpravy/2016/ministerstvo-financi-predstavilo-projekt-25248>.
- [11] MF ČR (2018). Press release [online]. [cit.2018-02-09]. Available at: <http://www.mfcr.cz/cs/aktualne/tiskove-zpravy/2018/zruseni-superhrube-mzdy-snizi-odvodovou-31006>.
- [12] Randová, K., Krajňák M. and Friedrich, V. (2013). Impact of Reduced VAT Rate on the Behavior of the Labour Intensive Services Suppliers. *International Journal Of Mathematical Models And Methods In Applied Sciences – Naun*, vol. 7, pp. 508-518.
- [13] Široký, J. (2013). *Daně v Evropské unii*. Praha: Linde.
- [14] Decree No. 500/2002 Sb., as amended.
- [15] Zelený, M. (2017). Využití IFRS ve světě. *Auditor*, vol. 8, pp. 5-8.

## Evaluation of Educational Policy Indicators in European Union Countries

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### **Abstract**

*Educational policy is one area of public policies not included among the common European Union policies. The European Union, nevertheless, affects the direction of education of the member states and helps their development. The paper deals with selected indicators of educational policy in European Union countries and analyses total expenditures on education and indicators of education, with a particular focus on indicators in terms of the Europe 2020 strategy (Early leavers from education and training, Tertiary educational attainment) and Participation rate of young people in education and training in years 2010–2015. The indicators of educational policy are evaluated by use of hierarchical cluster analysis. The results show differences in the volume of allocated expenditures on education in EU countries, but also in the attainment of the goals of the Europe 2020 strategy in education.*

**Keywords:** educational policy, Europe 2020 strategy, evaluation, expenditures on educational, indicators

**JEL Classification:** H52, H75, I21

### **1. Introduction**

The strategy Europe 2020 is the main economic agenda of reforms of the European Union with an outlook for the year 2020. It replaces the Lisbon strategy, which expired prior to the year 2010. The Strategy elevates five main goals, which were defined for the EU as a whole. Amongst others, it aims to improve the level of education, mainly through the decrease of the drop-out rate below 10% and the increase of university-educated, or comparably educated, population aged 30–34 to no less than 40% (Staničková, 2017). Education plays a substantial role in the development of human potential and the economic development of a country. According to Cankaya, Kutlu and Cebeci (2015) all member states perceive the need to increase the quality of their education, develop access to learning at all stages of life. Life-long learning has become the fundamental point in EU's educational strategy. Education policy is the key activity of the Europe 2020 strategy focused on supporting education and employment of the youth and is an area of public policies not among the joint EU policies. It pertains to not only education reforms and legislative framework, but also financing as the main tool of education policy.

Adopting a theoretical and empirical approach, the present paper aims to evaluate selected indicators of educational policy in EU countries. In particular, it deals with total general government expenditure on education as one of the crucial indicators of economic competitiveness and on indicators in terms of the Europe 2020 strategy in education (early leavers from education and training, tertiary educational attainment) in years 2010 and 2015.

By use of hierarchic cluster analysis, indicators by the Europe 2020 strategy and participation rate of young people in education and training are evaluated in the period 2010 and 2015.

### ***1.1 Literature Review***

Current issues of educational policy in relation to its development, trends and reforms with respect to the targets of the Europe 2020 strategy are dealt with by, e.g. Pépin (2011); Walkenhorst (2008); Kamkhaji and Radaelli (2016); Johnes et al. (2017), as well as a number of comparative analyses and studies (Philips and Ertl, 2003; European Commission, 2016; OECD, 2017). According to the European Commission (2016), education and training help to equip people with the right skills and to find employment, which presents the best protection against poverty. But education can only play this part if it delivers good results. International surveys show that there is still room for improvement and this is one of the reasons why education and training remain a high priority for Europe. Another study, European Commission/EACEA/Eurydice (2013), presents a focused comparative analysis of national responses to the Europe 2020 priorities in the field of education and training. It concentrates on recent and forthcoming national reforms across four thematic areas that have a direct relevance to the Europe 2020 strategy: early school leaving (ESL), higher education, youth employment and vocational education and training (VET) and lifelong learning. Pepin (2011) explains why the inclusion of education in the Lisbon strategy was a major step forward and presents an assessment that underlines not only the role played by the Lisbon strategy in relaunching and consolidating EU education cooperation. Walkenhorst (2008) explores the evolution, expansion and dynamics of EU education policy and applying standard public policy analysis, it examines EU education policy with regard to context and process. He claims that EU education policy has, in recent years, been subject to a significant turn in functional terms and an assessment of EU documentation from 1970 to 2006 reveals a shift from politico-economic to economic-functional goals. De Witte, et al. (2013) examines how the institutional context and education and labour market policies correlate to the level of early school leaving by exploiting variation over time and across countries. Authors show that differences between countries may be attributable to country specific differences in school systems or influences of the (local) labour market on early school leaving and may thus provide arguments against or in favour of systemic reforms.

## **2. Problem Formulation and Methodology**

Two initiatives dealing with education and employment exist in terms of the Europe 2020 strategy, which concentrate on youngsters. Namely, these are 1) Youth on the Move and 2) Agenda for New Skills and Jobs. Youth on the Move constitutes one out of seven initiatives which are part of the Europe 2020 strategy. It comprises 28 activities which address the fight against unemployment of the youth, improvement of the quality of lifelong and higher education and the support of education and work mobility. The main goals include the reduction of early leaving of schools, support of specialised education and the preparation and attractiveness of higher education. The initiative is financed through existing EU programmes in education and youth (Lifelong Learning Programme) as well as structural funds, mainly the European Social Fund. The initiative Youth on the Move includes three main areas: 1) Improvement of lifelong learning system: the aim is to harmonise the skills and knowledge acquired during studies with demands placed by the labour market. 2) Increase in young people with higher education: the EU strives to reach that 40% of young Europeans graduate from university in 2020 (in 2010, they accounted for 33.6%). 3) Education and work mobility: according to the EU plans, by 2020, all young people in Europe should spend some time of

their studies abroad. The Student Research Projects' Efficiency is further dealt with by Staničková, Melecký and Navrátil (2013).

## ***2.1 Data and Methods***

The paper uses data available from Eurostat Statistic database (Government statistic, Europe 2020 indicator and Education and training) in years 2010–2015. For the sake of the assessment, 2010 was chosen as the first year of the application of the Europe 2020 strategy in education and 2015 as the half of the strategy period. The selected group comprises 28 EU countries (Belgium-BE, Bulgaria-BG, Czech Republic-CZ, Denmark-DK, Germany-DE, Estonia-EE, Ireland-IE, Greece-EL, Spain-ES, France-FR, Croatia-HR, Italy-IT, Cyprus-CY, Latvia-LV, Lithuania-LT, Luxembourg-LU, Hungary-HU, Malta-MT, Netherlands-NL, Austria-AT, Poland-PL, Portugal-PT, Romania-RO, Slovenia-SI, Slovakia-SK, Finland-FI, Sweden-SE, United Kingdom-UK). Indicators of education policy in EU countries in years 2010 and 2015 are compared by use of comparative analysis. The comparison makes use of total general government expenditure on education as % of GDP as a partial indicator of competitiveness of EU countries, and indicators of the Europe 2020 strategy in education (Early leavers from education and training, Tertiary educational attainment and Participation rate of young people in education and training). Further, an evaluation is carried out of selected indicators of education policy (Early leavers from education and training, Tertiary educational attainment and Participation rate of young people education and training) in EU countries in the period 2010–2015 by means of hierarchic cluster analysis. Cluster analysis is a multi-dimensional statistical method used to classify objects. It enables sorting observed units into several groups so that similar units occurred in the same group, and, in turn, so that units from other groups differed fundamentally. Thus, hierarchical tree diagram (i.e. dendrogram) is widely applied for depiction of final distances between objects (Everitt, et al., 2011). The evaluation of similarities and differences, based on indicators of education policy in EU countries, is seen in a box-plot. Box-plot is a form of graphic visualization of numerical data through their quartiles. The data was processed with the software R.

## **3. Results – Evaluation of Selected Indicators of Educational Policy in European Union Countries**

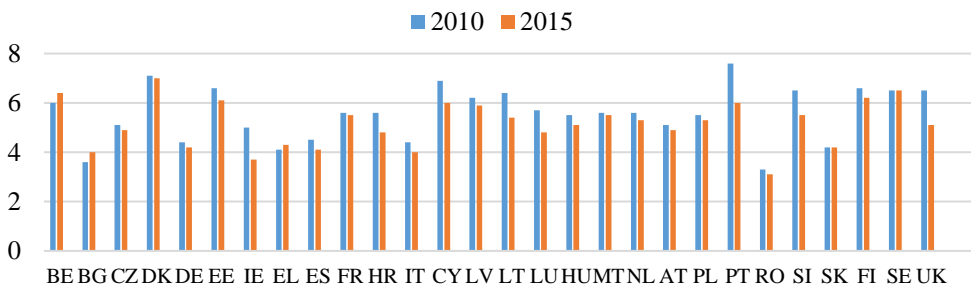
This section deals with selected indicators of educational policy in EU countries and their evaluation in 2010 and 2015.

### ***3.1 Financing and Expenditures on Education in EU Countries***

Throughout the developed and developing worlds, education spending is seen as a key tool for government policy makers in the quest for economic growth. Promoting ‘human capital’ development is a prime objective for economic and education ministries (Wolf and McNally, 2011). Expenditures on education are one indicator of comprehensive indices in the evaluation of competitiveness of countries. The relationship between measurable output indicators of competitiveness in selected EU countries is determined by Majerova and Nevima (2016). Total expenditures on education comprise direct costs on salaries, including taxes, and operating investment and non-investment costs. The comparison of total expenditures on education in EU (28) countries in 2010 and 2015 is seen in Figure 1. The highest expenditures on education as % of GDP is seen in Portugal in 2010 (7.6%). In 2015, the expenditures dropped radically (by 1.6%), which is also the sharpest decrease among all EU countries in the observed period. This situation resulted from general economic problems of the given country, which was also

reflected on the financing of education. As the most stable with the highest share of general government expenditures on education as % of GDP is seen Denmark (approximately 7%) and Sweden (approximately 6.5%). Both countries tend to be associated with a high level and quality of education. Also Finland invests heavily in education (6.6% in 2010 and 6.2% in 2015). This fact is also corroborated by comparative tests of quality in education, dominated by Finland. By contrast, Romania invests minimum resources in education (approximately 3%) as well as Bulgaria (approximately 4%), not only in the initial stage of the Europe 2020 strategy, in 2010, but also in 2015. The results manifest that the considerable difference occur among EU states in allocated total expenditures on education as % of GDP in the observed years. This can be explained by the fact that institutions of education in EU states are in possession of a variety of financial resources (investments, non-investment operating costs, direct costs on employees, other non-investment costs, etc.). The highest item in operating costs on education are expenditures on teaching staff. In more than a third of countries, financial resources on teaching staff are allocated at the central level of ministries directly to schools (Ireland, Spain, Croatia, Cyprus, Netherlands, Portugal and Slovenia) or pay for teachers' salaries (Belgium, Germany, Italy, Hungary, Malta and Liechtenstein). These results are also supported by other studies, e.g. Philips and Ertl (2003); European Commission/EACEA/Eurydice (2013); European Commission (2016); OECD (2017).

**Figure 1: Comparison of Total General Government Expenditures on Education in EU Countries in Year 2010 and 2015 (% of GDP)**



Source: Authors according Eurostat (2018)

### 3.2 Evaluation of Educational Policy Indicators in Terms of the Europe 2020 Strategy

Further, two indicators are compared and evaluated in terms of the Europe 2020 strategy regarding education in EU countries (Early leavers from education and training and Tertiary educational attainment) over the period 2010–2015. According to Eurostat (2018), the indicator “*Early leavers from education and training*” is defined as the percentage of the population aged 18–24 with lower secondary education at most and who were not in further education or training during the last four weeks prior to the conduction of the survey. The indicator “*Tertiary educational attainment*“ is defined as the percentage of the population aged 30–34 who have successfully completed tertiary studies (e.g. university, higher technical institution, etc.). Comparison of indicators of education in EU countries in years 2010 and 2015 is seen in Table 1. The highest % of early leavers of education and training young people until 2020 is set in Italy and Spain, as opposed to Croatia and Poland, with the lowest %. On the defined level of 10% or slightly below are found the majority of the countries, except for RO, BG, ES, IT. The target defined in terms of the Europe 2020 strategy, namely to increase



the number of people aged 30–34 with finished higher or comparable education to no less than 40%, should be attained by more than a half of EU countries by 2020. The lowest fulfilment of this target, below 30%, is set in Italy and Romania.

**Table 1: Comparison of Indicators of Education in Terms of the Europe 2020 Strategy**

country	ELET		TEA		country	ELET		TEA	
	2010	2015	2010	2015		2010	2015	2010	2015
BE	11.9	10.1	44.4	42.7	LT	7.9	5.5	43.8	57.6
BG	12.6	13.4	28.0	32.1	LU	7.1	9.3	46.1	52.3
CZ	4.9	6.2	20.4	30.1	HU	10.8	11.6	26.1	34.3
DK	11.0	7.8	41.2	47.6	MT	23.8	19.8	22.1	27.8
DE	11.8	10.1	29.7	32.3	NL	10.0	8.2	41.4	46.3
EE	11.0	12.2	40.2	45.3	AT	8.3	7.3	23.4	38.7
IE	11.5	6.9	50.1	52.3	PL	5.4	5.3	34.8	43.4
EL	13.5	7.9	28.6	40.4	PT	28.3	13.7	24.0	31.9
ES	28.2	20.0	42.0	40.9	RO	19.3	19.1	18.3	25.6
FR	12.7	9.2	43.2	45.0	SI	5.0	5.0	34.8	43.4
HR	5.2	2.8	24.5	30.8	SK	4.7	6.9	22.1	28.4
IT	18.6	14.7	19.9	25.3	FI	10.3	9.2	45.7	45.5
CY	12.7	5.2	45.3	54.5	SE	5.5	7.0	45.3	50.2
LV	12.9	9.9	32.6	41.3	UK	14.8	10.8	43.1	47.9

Note: ELET – Early leavers from education and training by sex % of the population aged 18–24 with the most lower secondary education; TEA – Tertiary educational attainment (total)

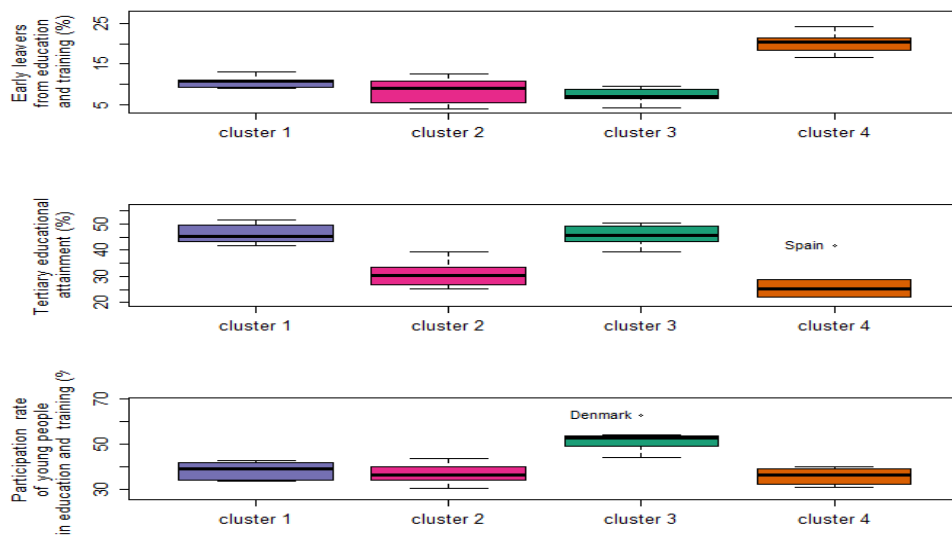
Source: Authors according Eurostat (2018)

### 3.3 Evaluation of Indicators of Educational Policy Using Cluster Analysis

Next, two indicators of the Europe 2020 strategy are evaluated (Early leavers from education and training by sex, Tertiary educational attainment by sex, age group 30–34) and Participation rate of young people in education and training in the period 2010–2015, by use of cluster analysis and box-plot. The results of the evaluation of the individual indicators of education policy in EU countries by clusters are seen in the box-plot (Figure 2) and appendix (dendrogram). EU countries were divided into four clusters by the level of dissimilarity (distance) of roughly 6.1. **The first cluster** comprises six countries (IE, CY, EE, FR, BE, UK), with low Participation rate of young people in education and training (approximately 40%). With regard to the indicator Early leavers from education and training by sex, these figures reach approximately 11% and in Tertiary educational attainment as the percentage of the population aged 30–34, which account for approximately 45%. Based on the evaluated indicators of education policy, the most similar countries in the first cluster are Ireland and Cyprus. **The second cluster** is composed of ten countries (BG, LV, EL, HU, CZ, HR, SK, PL, DE, AT), with moderate participation rate of young people in education and training (with the median of 36.4%), which reach 9.1% in terms of Early leavers from education and training by sex, with a small share of Tertiary educational attainment as the percentage of the population aged 30–34 (approximately 30%). The highest similarity by the evaluated indicators of education is seen in Greece and Hungary. **The third cluster** includes seven countries (FI, SE, DK, NL, LU, SI, LT) with high participation rate of young people in education and training (with the median of 52.7%). An outlier in Participation rate of young people in education and training is seen in Denmark (62.9%), which reaches the highest value out of all EU countries. With respect to the target of the Europe 2020 strategy – Early leavers from education and

training by sex – these countries reach the median of 7.2% and all countries fulfil the limit below 10% in the observed period 2010–2015. Similarly, in the second target, Tertiary educational attainment, as the percentage of the population aged 30–34 (the median of 45.5%) all countries are above 40% (except for Slovakia, with 39.4%). In the third cluster, the Netherlands and Finland are the most similar. **The fourth cluster** contains five countries (ES, PT, IT, MT, RO), and is the least effective in terms of the evaluated indicators of education. The most similar countries in the fourth cluster are Malta and Romania. With regard to the indicators of the Europe 2020 strategy, countries in the fourth cluster demonstrate the worst results out of all EU countries. The median is higher in Early leavers from education and training, with the value of 20.3% (against the requirement of less than 10%). Also the indicator Tertiary educational attainment as the percentage of the population aged 30–34 shows bad results in these countries (the median of 25.1%). The exception is Spain with an outlier of 41.8%, which, unlike the rest of the countries in the fourth paragraph, fulfils the target of the Europe 2020 strategy (at least 40% of the population aged 30–34 years with university education). Similarly, participation rate of young people in education and training is low (the median of 36.5%), which is comparable to the countries of the second cluster. On the basis of the results, it may be said that differences in education can be observed mainly in particular systems of education of the individual countries, in their structure, priorities, system reforms or disharmony between educational policies and the needs of the labour market.

**Figure 2: Evaluation of Selected Indicators of Education in EU Countries in 2010–2015 Using Box-plot**



Source: Authors' calculation according Eurostat (2018)

#### 4. Conclusion

Educational policy in the EU is based on the implementation of an open method of coordination of education and specialised preparation. National governments of member states are answerable for the educational systems, but collaborate at the EU level in order to reach their common goals. The paper evaluated selected indicators of education policies in EU countries. In both 2010 and 2015, the highest general government expenditures on education

as % of GDP was seen in Scandinavian countries and Portugal, as opposed to Romania and Bulgaria, which invest the least in education. The results acquired by means of cluster analysis showed that the biggest differences in all observed indicators of educational policy are present between the countries of the third (FI, SE, DK, NL, LU, SI, LT) and fourth cluster (ES, PT, IT, MT, RO). All countries in the third cluster are fulfilling both targets of the Europe 2020 strategy in education in the given period 2010–2015. In contrast, countries of the fourth cluster fail to reach any of the goal (with the exception of Spain, which attains the 40% share of people aged 30–34 with a finished higher education). The evaluation of selected indicators of education policy in EU countries in the period 2010–2015 also shows that countries of the first cluster (IE, CY, EE, FR, BE, UK) fulfil the goal of the Europe 2020 strategy, namely Tertiary educational attainment as the percentage of the population aged 30–34. The second target, namely Early leavers from education and training by sex, is fulfilled by 5 out of 10 countries of the second cluster. As regards the participation rate of young people in education and training, the smallest differences were found in all countries (almost 40%), with the exception of the third cluster (53%). Educational policy in EU countries was evaluated exclusively by means of selected indicators with focus on indicators of the Europe 2020 strategy in education. Evaluation of a larger amount of indicators of education, including quality indicators, would substantially exceed the scope of the paper, and can thus serve as a theme for further research.

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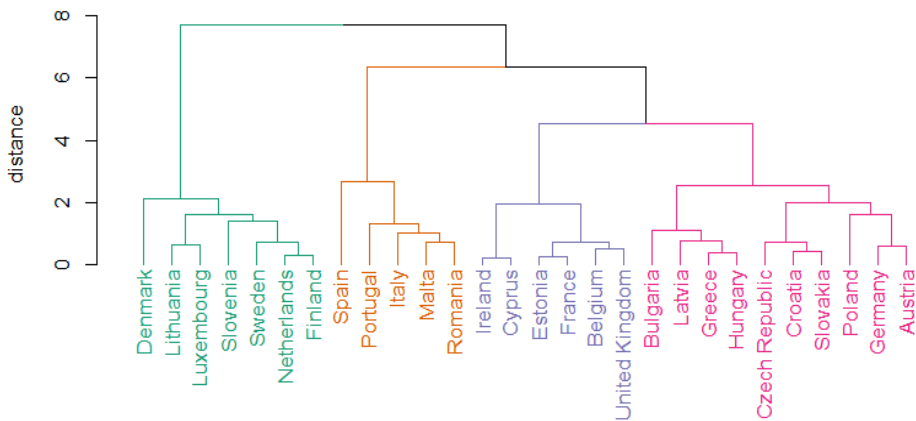
### **References**

- [1] Cankaya, S., Kutlu, Ö. and Cebeci, E. (2015). The Educational Policy of European Union. *Procedia – Social and Behavioral Sciences*, vol. 174 (2015), pp. 886–893.
- [2] De Witte, K. et al. (2013). The Impact of Institutional Context, Education and Labour Market Policies on Early School Leaving: a comparative analysis of EU countries. *European Journal of Education*, vol. 48, iss.3, pp. 331–345.
- [3] European Commission (2016). *Education and Training Monitor 2016. Country analysis*. Luxembourg: Publications Office of the European Union.
- [4] European Commission/ EACEA/Eurydice (2013). *Education and Training in Europe 2020: Responses from the EU Member States. Eurydice Report*. Brussels: Eurydice.
- [5] Eurostat (2018). *Statistics* [online]. [cit.2018-01-25]. Available at: <http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/themes>.
- [6] Everitt, B. et al. (2011). *Cluster Analysis*. London: John Wiley & Sons.
- [7] Johnes, G. et al. (2017). *Handbook of Contemporary Education Economics*. Cheltenham, Northampton: Edward Elgar Publishing.
- [8] Kamkhaji, J.C. and Radaelli, C.M. (2016). Crisis, learning and policy change in the European Union. *Journal of European Public Policy*, vol. 24, iss.10, pp. 1563–1563.
- [9] Majerová, I. and Nevima, J. (2016). The Issue of Competitiveness: A Case of Visegrad Group Plus Countries. In *International Conference on European Integration*. Ostrava: VŠB Ostrava, Faculty of Economic, pp. 572-583.

- [10] OECD (2017). *Education at a Glance 2017: OECD Indicators*. Paris: OECD Publishing.
- [11] Pépin, L. (2011). Education in the Lisbon Strategy: assessment and prospects. *European Journal of Education*, vol. 46, iss.1, pp. 25–35.
- [12] Philips, D. and Ertl, H. (2003). *Implementing European Union Education and Training Policy. A Comparative Study of Issues in Four Member States*. New York, Boston, Dordrecht, London, Moscow: Kluwer Academic Publishers.
- [13] Staničková, M. (2017). Can the implementation of the Europe 2020 Strategy goals be efficient? The challenge for achieving social equality in the European Union. *Equilibrium-Quarterly Journal of Economics and Economic Policy*, vol. 12, iss.3, pp. 383–398.
- [14] Staničková, M., Melecký, L. and Navrátil, B. (2013). Measuring the Student Research Projects' Efficiency Using DEA Method. In *Efficiency and Responsibility in Education 2013*. Prague: Czech University of Life Sciences Prague, pp. 573–580.
- [15] Walkenhorst, H. (2008). Explaining change in EU education policy. *Journal of European Public Policy*, vol. 15, iss.4, pp. 567–587.
- [16] Wolf, A. and McNally, S. (2011). *Education and Economic Performance*. Cheltenham: Edward Elgar Publishing.

## Appendix

### Dendrogram – EU countries by selected indicators of education



Source: Authors calculation according Eurostat (2018)

## Arctic Policy of the European Union

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### **Abstract**

*The importance of the Arctic region leads states to creating their own Arctic policies to promote and secure their interests in the region. The role in the creating future Arctic policies in Europe belongs to the governments of the European Arctic states and intergovernmental authorities. The EU is not a central public actor in the Arctic; however, raising importance of the Arctic forced it to develop an Arctic policy. The paper analyzes the Arctic policies adopted by EU since the European Parliament Resolution on Arctic Governance from 2008 to the newest 2016 Joint Communication "The integrated EU policy for the Arctic". The Joint Communication puts much greater attention to the internal dimension of the EU's Arctic affairs than any of the previous documents dealing with the EU's Arctic policy.*

**Keywords:** Arctic, Arctic policy, European Union

**JEL Classification:** F50, K30, K390

### **1. Introduction**

The Arctic has become the subject of many scientific and political debates in recent decades. It is the subject of an examination of various scientific disciplines. From an international perspective, the most important question is the question of its international status. Antarctica has a stable legal regime that froze the territorial claims of states. But what about the Arctic? According to Kristina Schönfeldt, the Arctic legal regime is built on 3 pillars: international law, national law and soft law. (Schönfeldt, 2017, p. XXXV) All these areas are often overlapping, making the Arctic governance a very complex system. The attractiveness of the Arctic stimulates the interest and activity of not only Arctic states, but also non-Arctic actors (China, India, etc.) and international organizations (EU).

No state or international organization exercises effective control over Arctic as a whole. The main actors in the Arctic, due to its character (the Arctic Ocean and part of the mainland - a territory belonging to the sovereign states) are sovereign Arctic states. "The Arctic Five" is a community of Arctic coastal states whose territories are included in all the definitions of the Arctic and, moreover, have direct access to the Arctic Ocean. The Arctic coastal states have confirmed in the Ilulissat Declaration that the Arctic Ocean is covered by an extensive legal framework and that law of the sea provides all important rights and obligations. (Danish Ministry of Foreign Affairs, 2008) The Ilulissat Declaration is an explicit expression of the Arctic coastal states that they do not plan to surrender their territorial claims in the future, or to allow non-Arctic states to exert their influence in the Arctic. Under UNCLOS, the A5 states have defined the limits of their sovereignty and basically denied any globalization of the Arctic.

The Arctic Council is the only forum where all Arctic states cooperate on an intergovernmental level. The Arctic Council does not have the power to issue legally binding standards and to determine the measures, but has been able to manage the priorities of the Arctic States and to issue authoritative reports (for example on Arctic pollution and climate change of the Arctic) under which other authorities have acted. Despite the lack of powers, the Arctic Council has an enormous influence on the area, and therefore the out-of-state states and the EU have sought to achieve observer status. (Anderson, 2009, p. 105-106)

The Arctic and the EU are interconnected not only by geographical proximity but also by the fact that the EU Member States are also Arctic states. Denmark, Finland and Sweden represent the geographical link between the EU and the Arctic. The Kingdom of Denmark is considered an Arctic state only because of Greenland and Faroe Islands. The relations of the Kingdom of Denmark and its territories towards the EU have heterogeneous nature. (Chuguryan and Kucharčík, 2014, p. 280) It should be noted, however, that France, Germany, Italy, the United Kingdom, the Netherlands and Spain gained the observer status in the Arctic Council. The EU itself has had an ad hoc observer status in the past. In addition, the EU maintains close relations with Iceland and Norway as members of the European Economic Area (EEA) and the European Free Trade Agreement (EFTA), while countries like Canada and the United States are the EU's strategic partners (European Commission, 2016).

## **2. Problem Formulation and Methodology**

The EU involvement in Arctic affairs is important for both EU and Member States, especially those in the Arctic region. The importance lies mainly in the economic interests of individual states or the EU as a whole. The EU is not a central public actor in the Arctic; however, raising importance of the Arctic forced it to develop an Arctic policy. Although the EU as such does not border with Arctic, it shares with it historical, economic, trade and geographical relations, while many existing EU activities, funding, projects and decisions have already had an impact on the sustainable development of the region. EU policies on the environment, climate, energy, research, transport, hunting and fisheries have a direct impact on the Arctic. (European Commission, 2016)

The EU had not been showing any particular interest in the Arctic till 2008. The paper analyzes the Arctic policies adopted by EU since the European Parliament Resolution on Arctic Governance from 2008 to the newest 2016 Joint Communication “The integrated EU policy for the Arctic”.

While concluding the article we used the method of analysis and subsequent synthesis, abstraction, and deduction. The research mostly consisted of analyzing the primary sources of EU's Arctic policies – the documents issues by the European Parliament, Council Commission, respectively High Representative – and their comparison.

## **3. Development of the Arctic policy of the EU**

The intention “to develop an EU Arctic policy based on the evolving geo-strategy of the Arctic region, taking into account i. a. access to resources and the opening of new trade routes” was for the first time mentioned in the paper from the former High Representative Javier Solana and the European Commission to the European Council called “Climate change and International Security” from March 14, 2008. (EU High Representative for the Common Foreign and Security Policy, 2008)

### **3.1 European Parliament Resolution on Arctic Governance (2008)**

In the introduction to the Resolution of October 9, 2008 on Arctic Governance, the European Parliament draws attention to the events, conferences and legal acts that are related to the Arctic and have given rise to the adoption of the Resolution (the International Polar Year 2007-2009, placement of the titanium flag at the bottom of the Arctic Ocean by the Russian submarine in August 2007, UNCLOS, Ilulissat Declaration, Commission Communication “An Integrated Maritime Policy for the European Union”, Political Document of the High Representative “Climate Change and International Security”, etc.). It reflects the environmental changes and their impact on the Arctic flora and fauna, Indigenous Peoples’ livelihood, and underlines the importance of the Arctic for global climate.

The first official document to set the stage for further development of EU’s Arctic Policy was the Parliament’s resolution on Arctic governance from October 7, 2008. “Arguably, the EU did not start with the best possible course with proposals that was not well received by some of the other Arctic states and in particular Canada and its Indigenous Peoples.” (Grøne, 2016, p. 31)

EP called on the Commission to address, at least, the following issues in its communication:

- a. The state of play in relation to climate change, and adaptation to it, in the region;
- b. Policy options that respect the indigenous populations and their livelihoods;
- c. The need to cooperate with our Arctic neighbours on cross-border issues, in particular maritime safety; and
- d. Options for a future cross-border political or legal structure that could provide for the environmental protection and sustainable orderly development of the region or mediate political disagreement over resources and navigable waterways in the High North. (European Parliament, 2008, Article 7).

The most important part of the Resolution is that European Parliament urged the Commission to “to take a proactive role in the Arctic by at least, as a first step, taking up ‘observer status’ on the Arctic Council, and considers that the Commission should set up a dedicated Arctic desk.” (European Parliament, 2008, Article 14). It also suggested that “the Commission should be prepared to pursue the opening of international negotiations designed to lead to the adoption of an international treaty for the protection of the Arctic, having as its inspiration the Antarctic Treaty, as supplemented by the Madrid Protocol signed in 1991, but respecting the fundamental difference represented by the populated nature of the Arctic and the consequent rights and needs of the peoples and nations of the Arctic region.” (European Parliament, 2008, Article 15). This ambitious goal should have its beginnings in establishing such a regime in the uninhabited part of the Arctic - in the middle of the Arctic Ocean, which was not claimed by any state. The EU observer status was requested, but the regime proposed in the Resolution was never applied to the Arctic.

### **3.2 European Commission Arctic Communication (2008)**

This Communication set out EU interests and proposes action for EU Member States and institutions around three main policy objectives:

- a. Protecting and preserving the Arctic in unison with its population;
- b. Promoting sustainable use of resources;
- c. Contributing to enhanced Arctic multilateral governance. (European Commission, 2008)

The Commission proposes measures to protect the environment and climate, support Indigenous Peoples, research, monitoring and assessments. “The Commission is clearly declaring its respect for Indigenous Peoples based on core principles as human rights and democracy and as the Commission specifies: ‘Hunting marine mammals has been crucial for the subsistence of the Arctic population since prehistoric times and the right to maintain their traditional livelihood is clearly recognized.’” (Grøne, 2016, p. 32)

The Communication promotes sustainable use of resources (hydrocarbons, fisheries), new maritime routes and tourism. In the section on Arctic multilateral governance, it refers to international conventions (UNCLOS) and regional or international organizations. The Commission no longer refers to the Antarctic Treaty as a possible model for the codification of the Arctic regime, as was the case in the resolution of the Parliament. In this section, the Commission itself states that it will apply for permanent observer status in the Arctic Council (ad hoc status was granted at that time), (European Commission, 2008).

### ***3.3 Council of the European Union Conclusions on Arctic Issues (2009)***

The Council considered that an EU policy on Arctic issues should be based on effective implementation of adequate measures to mitigate climate change preserving the uniqueness of the Arctic, reinforced multilateral governance, the United Nations Convention on the Law of the Sea (UNCLOS) and other relevant international instruments, respecting the Arctic ecosystems and residents (including indigenous peoples) while formulating and implementing EU actions and policies, and maintaining the Arctic as an area of peace and stability and sustainable conduct of economic activities. (Council of the European Union, 2009).

In order to take a next step towards the formulation of an overarching approach to EU policy on Arctic issues the Council lists 23 aims, for example, sustainable management of all natural resources; importance of supporting sustainable development for indigenous peoples, including on the basis of their traditional means of livelihood; minimising negative environmental impacts of exploitation and use of natural resources in the Arctic as well as promotion of energy efficiency and renewable energy; support for research on Arctic related issues which should be adequately reflected in the work programmes of the Seventh Community Framework Programme for Scientific Research; etc. (Council of the European Union, 2009).

The Council recognized the Arctic Council as the primary competent body for circumpolar regional cooperation and also shown the support for Barents cooperation and Northern Dimension policy. The Council requested the Commission to present a report on progress made in these areas by the end of June 2011. (Council of the European Union, 2009) In this period, the Commission had not been granted the Observer Status yet, so the Council expressed its continued support for the Commission to become an Observer in the Arctic. “The EU is de facto highly active in the Arctic Council on an ad hoc basis, but the relationship still remains to be institutionalised with the formal status of Observer.” (Grøne, 2016, p. 37) As Commission later stated in Joint Communication from 2012: “Observer status, as defined by the Arctic Council itself, would allow the EU to intensify cooperation and make a positive contribution to the work of the Council. It would allow the European Union to gain detailed understanding of the concerns of Arctic partners, which will be important when developing its own internal policies. Observer status would complement the EU’s Arctic engagement through the Barents Euro-Arctic Council and the Northern Dimension.” (European Commission, 2012).



### ***3.4 European Parliament Resolution of 20 January 2011 on a Sustainable EU Policy for the High North***

The Resolution stresses the need for a united, coordinated EU policy on the Arctic region, in which both the EU's priorities and the potential challenges and a strategy are clearly defined. (European Parliament, 2011) New maritime routes, the adoption of the Polar Code (maritime safety), and the opening of current or future routes for international transport are given importance. It also deals with natural resources and their rational use and the impact of climate change and pollution on the Arctic. Sustainable socio-economic development assesses the impact of changes on indigenous peoples - the threat to their original way of life, but also the emerging opportunities for economic development in the Arctic. Parliament noted the special position and recognized the rights of the indigenous peoples of the Arctic and pointed in particular to the legal and political situation of the indigenous peoples in the Arctic States and in their representation in the Arctic Council and stresses the need to adopt special measures to safeguard the culture, language and land rights of indigenous peoples in the way defined in ILO Convention 169. (European Parliament, 2011)

Resolution notes that “the Arctic region is not to be regarded as a legal vacuum, but as an area with well developed tools for governance; nevertheless points out that, due to the challenges of climate change and increasing economic development, those existing rules need to be further developed, strengthened and implemented by all parties concerned.” (European Parliament, 2011).

### ***3.5 Joint Communication to the European Parliament and the Council. Developing a European Union Policy Towards the Arctic region: Progress Since 2008 and next Steps (2012)***

Communication evaluated in detail EU's particular contributions in the Arctic in various areas (e.g. Fighting climate change, Research on the Arctic environment, Shipping and maritime safety). “Previous controversial references to multilateral governance in the Arctic are replaced by value-free headings of international cooperation.” (Grøne, 2016, p. 40) The main theme of Communication is 3 words - knowledge, responsibility, and engagement.

The Commission and High Representative based on EU's Arctic policy on 3 objectives:

- a. Support research and channel knowledge to address the challenges of environmental and climate changes in the Arctic;
- b. Act with responsibility to contribute to ensuring economic development in the Arctic is based on sustainable use of resources and environmental expertise;
- c. Intensify its constructive engagement and dialogue with Arctic States, indigenous peoples and other partners. (European Commission, 2012)

In the first part, the section “Knowledge” targets the actions of the EU on various activities - Arctic research, developing Arctic monitoring from space, supporting information and observation networks, while building know-how and technical expertise. The part “Responsibility” assesses the changes in the Arctic and their affect on the global scale and in particular in Europe. It elaborates the list of activities securing the responsible contribution in the Arctic, as well as promoting safe and sustainable management and use of resources in the region. The part Engagement defines what the involvement of the EU in the Arctic will include (e.g. bilateral dialogues with all EU's Arctic partners, involvement within relevant international frameworks on Arctic issues, ecosystem management, dialogue with Arctic inhabitants and indigenous peoples representatives). Second part of the communication

“Summary of the EU’s Contribution to the Arctic since 2008” highlights the increasing range of activities the EU is already undertaking in the region and reviews the issues outlined in the Commission Communication on ‘The EU and the Arctic Region’ from 2008 (European Commission, 2012).

### ***3.6 Joint Communication of the Commission and the High Representative: An Integrated European Union Policy for the Arctic (2016)***

European Parliament Resolution on the EU Strategy for the Arctic (2014) and Council conclusions on developing a European Union Policy towards the Arctic Region (2014) did not bring any particular changes or ideas to EU’s Arctic policy. Based on previous document, the integrated and coherent Arctic policy should have been adopted by 2015, but the Joint Communication was presented by the Commission and the High Representative with delay, on April 27, 2016.

Whereas in the past attention focused almost solely on the effects of climate change in the Arctic, more recently there has been growing awareness that feedback loops are turning the Arctic into a contributor to climate change. (European Commission and High Representative, 2016) The Communication also elaborates investment opportunities, especially in Barents region (approx. 140 billion €). It states that „EU already contributes substantially to Arctic research, satellite observation and regional development as well to the work of the Arctic Council, wherein countries beyond the Arctic such as China, India, Japan, the Republic of Korea and Singapore now have observer status.“ (European Commission and High Representative, 2016) This provision can sound critically in the context of the fact that the EU did not gain observer status in the Arctic Council in 2015. Countries can obtain the status only with unanimous approval of all members. The EU is therefore evaluating its activities in the region and at the same time points out that other countries, even though they are not geographically located in the Arctic, have nevertheless gained the observer status.

Three priority areas of integrated EU policy were proposed in Communication:

- a. Climate Change and Safeguarding the Arctic Environment;
- b. Sustainable Development in and around the Arctic;
- c. International Cooperation on Arctic Issues. (European Commission and High Representative, 2016)

The Communication states that the EU should attach particular importance to research, science and innovation which will play a key role across all three priority areas. Action in the priority areas should contribute to the implementation of Agenda 2030 and be in line with the 17 Sustainable Development Goals adopted by the United Nations in September 2015. (European Commission and High Representative, 2016)

Part “Climate Change and Safeguarding the Arctic Environment” lists the most serious problems the Arctic is facing, such as diminishing the size of the summer glaciation, the permafrost thawing, which has serious consequences such as landslides, infrastructure disruption, coastal erosion, releasing the pathogens and greenhouse gases. Climate change also affects ecosystems, endemic species and the way of life of indigenous peoples. (European Commission and High Representative, 2016) The EU suggested it could share experience and best practices on the circular economy with Arctic states in the area of waste legislation. “The EU is proposing this to diffuse EU norms into the international community and hence show that they are ready to cooperate on Arctic issues and thereby EU presence in the Arctic

becomes further legitimate.” (Grøne, 2016, p. 48) “The future challenge of the EU is to continue fulfilling its strong commitments and to eventually transform them into the binding secondary law in accordance with the efforts made at the international level, especially the recently adopted Paris Agreement.” (Drastichová, 2016, p. 159)

In the second priority area “Sustainable Development in and around the Arctic” the Communication focuses on challenges in the Arctic region concerning this topic – sparse settlement, underinvestment, and the lack of infrastructure. The Communication states that “the EU can play an influential role in shaping the future development of the European part of the Arctic through the application of EU rules relevant for the EEA and the deployment of financial Instruments” (European Commission and High Representative, 2016), but does not come with any special ways to solve above mentioned problems. It names the projects which are important sources of project financing (the Interreg North Programme; the Botnia-Atlantica Programme; the Baltic Sea Region Programme; and the Northern Periphery and Arctic Programme; as well as the Karelia and Kolarctic cross-border cooperation programmes under the European Neighbourhood Instrument), but not how exactly they contribute to sustainable development in the region. The EU is not creating any new programs to promote this aim.

However, later, the Commission suggests setting up a European Arctic stakeholder forum with the aim of enhancing collaboration and coordination between different EU funding programmes. This temporary forum should bring together EU institutions, Member States, and regional and local authorities to contribute to identifying key investment and research priorities for EU funds in the region. The process will also be open to Norway and Iceland under the European Economic Area Agreement, as well as to Greenland under the EU-Greenland Joint Declaration. (European Commission and High Representative, 2016)

In the final part “International cooperation on Arctic issues” the Communication elaborates the international and regional involvement of the EU in the relevant organizations, forums, and platforms. The Communication states that the EU recognizes and supports existing legal Instruments – UNCLOS; the EU will continue its active participation in the Arctic Council - the primary forum for international cooperation in the region; the EU will continue to support regional and sub-regional cooperation - the Barents Euro-Arctic Council, and the Northern Dimension policy, UN Economic Commission for Europe and in particular the UNECE Convention on Long-Range Transboundary Air Pollution (CLRTAP), the Nordic Council, the Nordic Council of Ministers. Further it states that the EU should cooperate with all Arctic partners - including Canada, Russia and the United States, and those that take an increasing interest in the Arctic such as China, India, Japan, the Republic of Korea and Singapore; already cooperates with Greenland under the EU-Greenland Partnership; has close relations with Iceland and Norway; and the EU will continue to engage with Arctic indigenous peoples and local communities to ensure that their views and rights are respected and promoted in the ongoing development of EU policies affecting the Arctic. (European Commission and High Representative, 2016)

The EU, across its documents, shows that its view of the Arctic is consistent and the EU is constant presenting its priorities. (Trávníčková. 2017, p. 307) According to Hon and Honová, the primary long-term objective of the EU must be its competitiveness (and of its individual member states) in the global economy, because only prosperous economies are able to create enough resources to fulfill the environmental objectives of the EU, expressed by the low-carbon economy. (Hon and Honová, 2012, p. 92) To conclude, as the Communication states in the end, “this policy document should guide the EU’s actions”, it is really rather a “guide” than a binding plan for action. The Communication „communicates“ in which areas and

programs concerning the Arctic the EU is currently present, but does not bring any or just a limited number of new ideas or engagement for the action. The Communication is very careful about statements which could halt the EU's possible observer status in the Arctic Council. On the other hand, the EU promotes its position and awareness about the importance of the Arctic, the European part of the Arctic in particular.

#### 4. Conclusion

The EU began to formulate its Arctic policy in 2008 European Parliament Resolution on Arctic Governance. The Resolution was quite ambitious it proposing the application the Antarctic Treaty regime on the Arctic region. By this proposal, the EU basically questioned or suppressed the rights of the Arctic coastal states and at the same time asked to be a observer in the Arctic Council.

The policies later focused on current environmental changes and protection of the environment, both living and non-living natural resources and their sustainable management, dialogue with indigenous peoples and protection of their livelihoods, scientific cooperation, navigation and its safety, its. The goals or rather proposals of the EU changed in the period of time from the more ambitious to the more acceptable ones. But the EU came with particular solutions and plans for particular problems only in very sparingly way. Policies rather focus on wide range of problems and involvement of the EU in international and regional organizations.

To this day, the EU was not be able to achieve its goal set even in the very first document developing its Arctic policy – to gain the permanent observer status in the Arctic Council which can be granted with the approval of all 8 members of the Arctic Council. The first issue which complicated EU's status was the ban of seal products on the EU market and consecutive objection of Canada (and its indigenous peoples). Later the position of the EU was complicated by the tensions between the EU and Russian federation after Crimea dispute. In a short time horizon, we do not believe this situation will change.

#### References

- [1] Anderson, A. (2009). *After the Ice. Life, Death, and Geopolitics in the New Arctic*. New York : Harper-Collins Publishers. 298 p. ISBN 978-0-06-157907-3.
- [2] Council of the European Union (2009). *Council conclusions on Arctic issues*. [online]. [cit.2018-02-28]. Available at: [https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/arctic\\_council\\_conclusions\\_09\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/arctic_council_conclusions_09_en.pdf).
- [3] Chuguryan, S. and Kurarčík, R. (2014). *Greenland towards Independence and Its Eventual EU Membership*. In Honová, I. et al. (ed.). Proceedings of the 2 nd International Conference on European Integration 2014. Ostrava: VŠB - Technical University of Ostrava, 2014, pp. pp.280-287. ISBN 978-80-248-3388-0.
- [4] Danish Ministry of Foreign Affairs (2008). *The Ilulissat Declaration*. [online]. [cit.2018-02-24]. Available at: [http://www.oceanlaw.org/downloads/arctic/Ilulissat\\_Declaration.pdf](http://www.oceanlaw.org/downloads/arctic/Ilulissat_Declaration.pdf).
- [5] Drastichová, M. (2016). *Climate Change in the Sustainable Development Context with the Focus on the EU*. In Kovářová, E., L. Melecký and M. Staničková (eds.). Proceedings of the 3rd International Conference on European Integration 2016.

- Ostrava: VŠB - Technical University of Ostrava, 2016, pp. 149-160. ISBN 978-80-248-3911-0.
- [6] EU High Representative for the Common Foreign and Security Policy (2008). *Climate change and International Security*. [online]. [cit.2018-02-24]. Available at: [http://www.consilium.europa.eu/media/30862/en\\_clim\\_change\\_low.pdf](http://www.consilium.europa.eu/media/30862/en_clim_change_low.pdf).
- [7] European Commission – Directorate-General for Maritime Affairs and Fisheries and European Union – External Action (2012). *Developing a European Union Policy towards the Arctic Region: progress since 2008 and next steps. Joint communication to the European Parliament and the Council* [online]. [cit.2018-03-07]. Available at: [https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/developing-a-european-union-policy-towards-the-arctic-region\\_en.pdf](https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/body/developing-a-european-union-policy-towards-the-arctic-region_en.pdf)
- [8] European Commission (2008). *European Commission Arctic Communication*. [online]. [cit.2018-02-28]. Available at: [http://eeas.europa.eu/archives/docs/arctic\\_region/docs/com\\_08\\_763\\_en.pdf](http://eeas.europa.eu/archives/docs/arctic_region/docs/com_08_763_en.pdf).
- [9] European Commission (2016). *An Integrated EU policy for the Arctic – Frequently Asked Questions* [online]. [cit.2018-02-20]. Available at: [http://europa.eu/rapid/press-release\\_MEMO-16-1540\\_en.htm](http://europa.eu/rapid/press-release_MEMO-16-1540_en.htm).
- [10] European Commission and High Representative (2016). *Joint Communication to the European Parliament and The Council: An integrated European Union policy for the Arctic* [online]. [cit.2018-03-15]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52016JC0021&from=EN>.
- [11] European Parliament (2008). *European Parliament resolution of 9 October 2008 on Arctic governance*. [online]. [cit.2018-02-24]. Available at: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P6-TA-2008-0474+0+DOC+XML+V0//EN>.
- [12] European Parliament (2011). *European Parliament resolution of 20 January 2011 on a sustainable EU policy for the High North*. [online]. [cit.2018-02-28]. Available at: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2011-0024+0+DOC+XML+V0//EN>.
- [13] Grøne, P. (2016). *The European Union's Strategy towards the Arctic - A Normative Power in the Region?* [online]. [cit.2018-03-07]. Available at: <http://www.martinbreum.dk/wp-content/uploads/2017/03/AAUDIR-Final-Thesis-.pdf>.
- [14] Hon, M. and Honová, I. (2012). *EU Energy and Environmental Policies Threatening Competitiveness of the EU*. In Honová, I., L. Melecký and M. Staničková (ed.). *Proceedings of the 1st International Conference on European Integration 2012*. Ostrava: VŠB-Technical University of Ostrava, 2012, pp. 86-93. ISBN 978-80-248-2685-1.
- [15] Schönfeldt, K. (2017). *The Arctic in International Law and Policy*. Oregon : Hart Publishing, 2017, 1484 p. ISBN 978-1-50991-576-7.
- [16] The Arctic Council (2018). *The Arctic Council: A backgrounder*. [online]. [cit.2018-01-29]. Available at: <http://www.arctic-council.org/index.php/en/about-us>.
- [17] Trávníčková, Z. (2017). *Cesta Evropské unie k arktické politice*. In: *Journal of International Relations, Faculty of International Relations, University of Economics in Bratislava*, 2017, Volume XV., Issue 3, pp. 296-309. ISSN 1339-2751.

## Smart Villages – New Concept of Rural Development of the EU

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### **Abstract**

*The smart villages' concept is a new direction for rural development policy in the European Union (EU) to bring new opportunities of rural development for villages and rural communities in EU member countries. The aim of the article is to analyze selected options of rural regions, which can be part of the smart villages' concept and their EU support schemes. The analysis includes articles published in two fields - rural development as part of the Common Agriculture Policy of EU and the competitiveness of regions in EU. In the introduction, we describe the concept of smart villages which is presented by official EU documents or some authors who deal with the issue. In the next section we analyze the possibilities of implementing the smart village project within the framework of the rural development plans in EU. In the next part of the article we will compare the basic model of smart cities, which is elaborated in a higher level with the smart village model in the EU. In the final part of the article we compare the smart areas between the two concepts - smart cities and smart villages.*

**Keywords:** *Common agricultural policy of the EU, rural development in the EU, smart villages, support of the EU*

**JEL Classification:** *Q16, Q56, R11*

### **1. Introduction**

The fundamental idea of the economic prosperity of the European Union is to bridge the gap between the regions and increase their competitiveness. Achieving both goals is only possible through their implementation into all EU policies. One of the policies for reducing regional disparities is the rural development policy, which is part of the EU's Common Agricultural Policy. One of the ways to reduce the gap between cities and the countryside is the concept of smart villages.

In the course of its development, the Common Agricultural Policy of the European Union (CAP EU) has been transformed into two pillars of support for EU agriculture - simplified to direct support and rural development. Rural development policy has a wide range of instruments that are implemented in a number of rural areas - a good environment, improved cooperation between the rural community and the local government, the introduction of new technologies and the internet, increasing the educational level of the rural population, development of tourism, rural culture. One of the reasons why II. pillar becomes an increasingly important element of the CAP of EU. Getting closer to the living standards of cities and towns is one of the objectives of preserving rural settlements and stopping rural people from moving to places where their expectations of improving their living conditions are often not met. Similarly, to 20 years ago, Cork's declaration, in Cork (Ireland), in

September 2016, significant stakeholders in rural development, agriculture and the environment presented smart ways of dealing with rural areas in the context of climate change, efficient food production, preservation of traditions and cultural heritage Development. The agriculture and forestry sector are still important for the EU and the Common Agricultural Policy is complementary to other EU policies. CAP and rural development are one of the key instruments for achieving EU priorities - economic growth and sustainability, and these objectives are not mutually exclusive.

In the introductory part of the article, we describe the smart city concepts as presented by the major authors who deal with the issue and the smart village concept as presented by EU official documents. In the second part of the article, we compare the basic concept of smart city according to Giffinger (2007), which is not only the EU developed at a higher level, with the smart village concept, Cork's Declaration and Revitalisation of Rural Areas Through Smart Villages (2017). The European Union has several tools and documents to support rural activation. The main sources of analysis will be official EU documents, expert articles from conferences and expert analysis available on the Internet. The most important document is the Rural Development Plans that Member States have set for the programming period 2014-2020, with some Member States having one or more plans drawn up together with 118. In this article, we will try to identify important trends in determining the development of municipalities and rural areas in general to become smart villages. We will try to design key components for the future intelligent rural framework based on smart areas as suggested by Giffinger (2007). In the final part of the part, a partial swot analysis of the smart village model was created, when the basic smart city model was incorporated.

## **2. Smart Cities and Smart Villages**

The EU has long declared its concern over rural displacement and especially the departure of young people from rural to urban areas. City centres and countryside prefer other priorities and objectives, with the goals of both such areas being modern and contemporary. It is necessary to ensure that rural and rural communities have sufficient access to services and have opportunities to work in traditional rural professions or to gain business support in such areas and / in new sectors.

Securing jobs is a key instrument for rural growth, the fact is that many of the traditional jobs cannot be relocated. The jobs created in this way are important in terms of landscape development, its formation and these sites are related to the protection of water resources, soil and climate protection, air and biodiversity. Jobs that could generate smart rural solutions would be both traditional in nature, but they could also offer applications for knowledge workers who are leaving it because of their inapplicability in rural areas. On the other hand, the lack of knowledge workers may pose a threat to rural development. The age structure of the current rural population also becomes a threat to rural areas. If rural development actors do not respond adequately to the increase in the numbers of the elderly and their special needs, there will be risk to wellbeing of this group of population. To achieve higher quality of life for the rural elderly, willingness and efforts of the locals must be supported by external assistance related to social infrastructure service development. (Kiaušienė, Vazonienė, 2016) The core of the smart city is to create favourable conditions for life in the city. This means that the city should function efficiently and in sustainable way using all its resources. (Baculáková, Viskupič) Authors further state - It can be identified by six features: sustainable economy, sustainable mobility (transport), a well-managed and resource-sparing environment, wise people, high life quality and smart governance.

The project that has been implemented by the Centre of Regional Science at the Vienna University of Technology identifies six main ‘axes’ (dimensions): These axes are: a smart economy; smart mobility; a smart environment; smart people; smart living; and, finally, smart governance. These six axes connect with traditional regional and neoclassical theories of urban growth and development. (Caragliu, Del Bo, Nijkamp, 2011) Giffinger (2007) further characterizes the different smart areas. There are several fields of activity which are described in literature in relation to the term Smart City: industry, education, participation, technical infrastructure, various ‘soft factors’; finally, we can identify six characteristics as a roof for the further elaboration of smart cities which should incorporate the findings but also allow an inclusion of additional factors.

**Table 1: Characteristics and Factors of a Smart City**

<b>SMART ECONOMY</b> (Competitiveness)	<b>SMART PEOPLE</b> (Social and Human Capital)
<ul style="list-style-type: none"> <li>• Innovative spirit</li> <li>• Entrepreneurship</li> <li>• Economic image &amp; trademarks</li> <li>• Productivity</li> <li>• Flexibility of labour market</li> <li>• International embeddedness</li> <li>• Ability to transform</li> </ul>	<ul style="list-style-type: none"> <li>• Level of qualification</li> <li>• Affinity to lifelong learning</li> <li>• Social and ethnic plurality</li> <li>• Flexibility</li> <li>• Creativity</li> <li>• Cosmopolitanism/Open-mindedness</li> <li>• Participation in public life</li> </ul>
<b>SMART GOVERNANCE</b> (Participation)	<b>SMART MOBILITY</b> (Transport and ICT)
<ul style="list-style-type: none"> <li>• Participation in decision-making</li> <li>• Public and social services</li> <li>• Transparent governance</li> <li>• Political strategies &amp; perspectives</li> </ul>	<ul style="list-style-type: none"> <li>• Local accessibility</li> <li>• (Inter-)national accessibility</li> <li>• Availability of ICT-infrastructure</li> <li>• Sustainable, innovative and safe transport systems</li> </ul>
<b>SMART ENVIRONMENT</b> (Natural resources)	<b>SMART LIVING</b> (Quality of life)
<ul style="list-style-type: none"> <li>• Attractivity of natural conditions</li> <li>• Pollution</li> <li>• Environmental protection</li> <li>• Sustainable resource management</li> </ul>	<ul style="list-style-type: none"> <li>• Cultural facilities</li> <li>• Health conditions</li> <li>• Individual safety</li> <li>• Housing quality</li> <li>• Education facilities</li> <li>• Touristic attractivity</li> <li>• Social cohesion</li> </ul>

Source: Giffinger (2007) p.12

We believe a city to be smart when investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure fuel sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance. (Caragliu A., Del Bo C., Nijkamp P. 2011)

If we want to define smart cities in a comprehensive way, there are several definitions that are conceptually different, often smart is confused with the word smart or digital. Other concepts include flexibility, individuality, strategic behaviour, city and population monitoring systems, social networks, use of information technologies, environmental sustainability issues. For a



better orientation in different concepts, a comprehensive set of factors are proposed that are necessary to create frameworks that may be important for the successful implementation of smart city projects and initiatives. These factors include external and internal factors that affect the sustainability and viability of smart cities projects. The eight clusters of factors include management and organization, technology, governance, policy, people and communities, the economy, built infrastructure, and the natural environment. (Chourabi, H. 2012)

Clark's declaration is considered to be a relatively coherent concept of rural development and the concept of smart villages in the EU. Conference participants recommend that an innovative, inclusive and inclusive rural development policy in the EU be geared towards the following (Clark's declaration 2016):

- promoting rural prosperity
- strengthening rural value chains
- investing in rural viability and vitality
- preserving the rural environment
- managing natural resources
- encouraging climate action
- boosting knowledge and innovation
- enhancing rural governance
- advancing policy delivery and simplification
- improving performance and accountability

The main element of the smart city concept is the use of information technology in order to improve management efficiency and standard of living, while reducing costs and use of resources, and ensuring greater participation of citizens in matters of management and urban development.

So, what is the difference between smart city and smart village, what makes these concepts the same and how they differ? "Smart cities are places where information technology is combined with infrastructure, architecture, everyday objects, and even our bodies to address social, economic and environmental problems." (Dumarey, 2017) The concept of smart city focuses in particular on the deployment of Information and Communication Technologies (ICT), the integration of all citizens in the 'internet for all' way, and other elements to address urban problems - transport, security, sustainability, the environment, waste management, etc. "Smart Villages are rural areas and communities which build on their existing strengths and assets as well as on developing new opportunities", where "traditional and new networks and services are enhanced by means of digital, telecommunication technologies, innovations and the better use of knowledge". (European Commission, 2017) It also follows from this definition that both projects focus mainly on the introduction of new technologies, digitization, innovation and interconnection of services. Smart city smart-model application has its strengths but also risks. According Nowodziński (2015) urban development requires a comprehensive approach to their operation and further development, considering the specific features of a given country, region and metropolitan area.

In the smart city model, Giffinger defines two areas that are focused on human resources and human capital – smart people a smart governance. Successful factors of the implementation of smart city model are management and organization, governance, policy context, people and communities. (Chourabi, 2012). "The primary building block of a smart city is a smart citizen." (Dumarey, 2017) For successfully implement the smart village concept it is necessary to define your local DNA. (Dumarey, 2017) Therefore, it is important to know the needs and problems of the population, to collect all this knowledge and to share it with all the stakeholders. To enhance the objectivity of information, it is necessary to provide support to

local communities, the key to success is to involve all actors. That is why complete information is important, which we can often get only with serious research methods, so this system is a space for academics and researchers.

### 3. Smart Villages According to Smart City

The European Committee of the Regions believes that in common with the Smart City model, a Smart Rural Areas initiative should take a broad approach to development and innovation to include the following six dimensions:

- (a) a smart, innovative, entrepreneurial and productive economy;
- (b) improved mobility, with accessible, modern and sustainable transport networks;
- (c) an environmental and sustainable energy vision;
- (d) qualified and engaged citizens;
- (e) quality of life in terms of culture, health, safety and education;
- (f) an efficient, transparent and ambitious administration; (The European Committee of the Regions, 2017)

Accordingly, we need to take into account the needs of rural areas and, accordingly, we will try to outline a similar model of 6 areas for smart villages while preserving the Clark's declaration.

Revitalization of villages and rural areas is necessary in terms of a sustainable area for the life and work of its inhabitants. In this respect, generational renewal of rural regions is needed, i.e. to acquire the ability of rural areas to attract its new inhabitants. Even the smart village concept considers that a crucial difference in the use of ICT is the crucial factor of the development regions, but especially in the introduction of fixed broadband networks. In 2012, 9.1 million homeless households were in 2012, with 90% of them in rural areas. (European Commission, 2014.)

The introduction of digital networks is one aspect of the problem, the second is the possibility of using them, because the capacity for their use is lower for the majority of the rural population. Therefore, it is necessary to provide education and training that will be targeted at a specific target group, where the priority group should be farmers and employees of the agricultural sector. Funding for education is possible through a number of EU financial instruments, not only through European agricultural funds. Another threat may be the different expectations and needs of the people living in the community, especially due to intergenerational conflicts. Growth of the elderly population in rural areas requires adapting the existing resources to new needs of the elderly in the systems of health care distribution, consumption, ensuring financing, balanced development of high quality services and their accessibility for everyone. (Kiaušienė, Vaznonienė, 2016)

The deficit of coverage of rural areas by digital signal can be eliminated by realizing the digital centres that could not only create new jobs and become new centres of communities where the local community would meet. At the same time, these sites could be centres for providing future services over the Internet - the creation of e-shops, consulting centres for the various needs of the population and other forms of services.. These could be a generator not only of other jobs but also a source of creative upgrading of community potential through community involvement and the support of creative thinking and non-technological innovations. (Baculáková, 2016) Implementation can deal with clusters that can arise through the pooling of all interested groups. Implementation can deal with clusters that can arise through the pooling of all interested groups. The establishment and development of clusters in Slovakia is seen as a chance how to enhance economic growth in regions and eliminate discrepancies among them. Clustering helps the region become much more competitive (Kordos, 2016). In

this context, it is necessary to consider the different needs of different types of municipalities; specific approaches are for municipalities with a small number of inhabitants, municipalities with large cadastral territory, and take into account the administrative and financial possibilities of municipalities. Unlike cities, communities should use the synergy effect of their potential and merits, in no case should they be rivals. In formulating the concept, it is necessary to consider the comparative advantages of the EU Member States, which are diverse and change over time (Fojtíková, 2016).

The opportunity for smart village implementation is undoubtedly the LEADER approach, characterized by the bottom-up policy, the involvement of local action groups (LAGs) and the use of a community-led local development strategy (CLLD). LAGs represent a revolutionary change for the regional development of the micro-regions. LAGs are the major coordinators of the cooperation in the rural areas and may be the driving force for the development of the territory. (Nunvářová, 2016) It can be a threat if we rely on these initiatives without involving local institutions, regional governments. Well-functioning and reliable public administration is an essential factor of economic growth. In terms of long-term trend is possible to state that the level of public administration in EU countries is increasing. (Ardielli, 2016). An efficient, transparent and ambitious administration is part of good governance of municipalities. Another threat is that there are many development strategies in rural development, the objectives of which overlap both horizontally and vertically. Strategic documents are often of a large scale, and more emphasis is often placed on their implementation and not on the achievement of goals, because of the large bureaucracy associated with costly administration.

The concept of smart villages can be implemented through rural development programs within the 2014-2020 programming period through a wide range of measures. The basic document for rural development in the 2014-2020 programming period is the EU Regulation N° 1305/2013. The EU priorities for rural development are based on the Europe 2020 programming document to ensure smart, sustainable and inclusive growth. The concept of EU rural development is conceived slightly differently when, instead of 4 axes, the current regulation for the 2014-2020 programming period defines 6 priorities for rural development and 15 so-called focus areas (Regulation EU, 2013). A new element in rural development policy is the European Innovation Partnership for Agriculture (EIP-AGRI) which is designed to speed up innovation on the ground. Through networking activities and projects, the EIPAGRI supports the development and dissemination of new knowledge, practices, processes and technologies in agri-food and forestry value chains. The European Network for Rural Development is an EU-wide network, bringing together rural development actors (Managing Authorities, stakeholders, researchers, advisors, businesses, local authorities, LAGs etc.) in view of improving the quality of Rural Development Programmes and enhancing participation. Several work streams under the ENRD relate to smart villages. The financial support of the European Regional Development Fund (ERDF) and the Cohesion Fund (CF) is focused on Research and Innovation, ICT, SME competitiveness and Low Carbon Economy. These Funds also deliver important investment in the fields of environment, climate action, transport, poverty reduction and administrative capacity. There is a close cooperation with the European Social Fund (European Commission, 2017).

**Table 2: Comparison of Smart City and Smart Village Concepts - Examples of Opportunities and Threats**

Giffinger's concept	European Committee of the Regions concept	Opportunities	Threats
SMART ECONOMY (Competitiveness)	Smart innovative, entrepreneur and productive economy	digital centres building clusters building partnerships within the framework of EU policies	network unavailability, lack of skills and education
SMART PEOPLE (Social and Human Capital)	Qualified and engaged citizens	community life in villages cooperation with other municipalities	age structure of the population
SMART GOVERNANCE (Participation)	An efficient, transparent and ambitious administration	LEADER, LAG	bureaucracy, complex administrative capacities
SMART MOBILITY (Transport and ICT)	Improved mobility, with accessible, modern and sustainable transport networks	short distances within municipalities	different types of municipalities - the border, small, large municipalities
SMART ENVIRONMENT (Natural resources)	An environmental and sustainable energy vision	environmental aspect of CAP EU, circular economy	deficit of partnerships with other EU policies
SMART LIVING (Quality of life)	Quality of life in terms of culture, safety and education	Social innovations	age structure of the population

Source: Giffinger (2007), The European Committee of the Regions (2017), author's own

#### 4. Conclusion

Like most of the recent EU-funded conceptual documents, the EU Action for Smart Villages document can be considered as little ambitious and just as a complement to all the EU's up-to-date EU support instruments for rural development. It would be necessary to develop a comprehensive and coherent strategy using all smart EU instruments. (The European Committee of the Regions, 2017). The smart village concept should involve all intra-EU partnerships on transport, innovation, energy, environment etc. Good social and economic conditions have a positive effect on the overall social climate that supports the development of the economy and contributes to the development of the region. (Kyjovská, 2014).

The concept of smart villages is one of many EU instruments of improvement of the living conditions in the countryside. When implementing the concept, it is necessary to take into account the specific conditions of the EU countryside, and in our opinion the areas of smart people, smart living and smart governance are important. In the past programming period,

2007 – 2013 staff structures have been developed that can enhance and accelerate the implementation of Smart Village concepts in smart areas defined by Giffinger (2007). The biggest opportunity to build a concept of smart village is the indisputably LEADER approach, the involvement of local action groups (LAGs) and the use of the community-led local development strategy (CLLD). A synergy of the potential of these strategies and the involvement of local governments can be used to provide financial support for a wide range of rural development program financial instruments in all EU regions. At the same time, the synergy of this effect can bring the willingness of all citizens to participate in projects within the smart village concept. In any case, approaches to implementing smart village show differences in urban and community environments. While cities are more focused on technology solutions and innovations, the project of smart village focuses on involvement of local people in the concept so that EU municipalities become a good place to live and work.

## References

- [1] Ardielli, E. (2016). Implementation of Good Governance Concept in the European Union Member Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 28 – 36.
- [2] Baculáková, K. (2016). IROP prioritná os 3 – analýza a aktuálny stav podpory. In *Economic, political and legal issues of international relations 2016*. pp.37 – 45. [online]. [cit.2018-02-02]. Available at: [https://fmv.euba.sk/www\\_write/files/veda-vyskum/archiv\\_konferencii/Medzinarodne\\_vztahy\\_2016.\\_Aktualne\\_otazky\\_svetovej\\_ekonomiky\\_a\\_politiky.pdf](https://fmv.euba.sk/www_write/files/veda-vyskum/archiv_konferencii/Medzinarodne_vztahy_2016._Aktualne_otazky_svetovej_ekonomiky_a_politiky.pdf).
- [3] Baculáková, K and Viskupič, J. (2017). Bratislava – potential and threats on the way to become smart city. In *Economic, political and legal issues of international relations 2017* pp. 6-13 [online]. [cit.2018-01-10]. Available at: [https://fmv.euba.sk/www\\_write/files/veda-vyskum/konferencie-virt/2017/zborn%C3%ADk\\_Virt\\_2017.pdf](https://fmv.euba.sk/www_write/files/veda-vyskum/konferencie-virt/2017/zborn%C3%ADk_Virt_2017.pdf).
- [4] Caragliu, A., Del Bo, C. and Nijkamp, P. (2011). Smart Cities in Europe, *Journal of Urban Technology*, vol. 18(2). [online]. [cit.2018-02-14]. Available at: [https://intaai.vn.org/images/cc/Urbanism/background%20documents/01\\_03\\_Nijka mp.pdf](https://intaai.vn.org/images/cc/Urbanism/background%20documents/01_03_Nijka mp.pdf).
- [5] Cork 2.0 declaration (2016). *A Better Life in Rural Areas* [online]. [cit.2018-01-22]. Available at: [https://ec.europa.eu/agriculture/sites/agriculture/files/events/2016/rural-development/cork-declaration-2-0\\_en.pdf](https://ec.europa.eu/agriculture/sites/agriculture/files/events/2016/rural-development/cork-declaration-2-0_en.pdf).
- [6] Dumarey, N. (2017). *Lessons from Smart Cities - for Smart Villages* [online]. [cit.2018-01-21]. Available at: [https://enrd.ec.europa.eu/sites/enrd/files/tg3\\_smart-villages\\_lessons-smart-cities\\_dumarey.pdf](https://enrd.ec.europa.eu/sites/enrd/files/tg3_smart-villages_lessons-smart-cities_dumarey.pdf).
- [7] European Commission (2014). *Investment for jobs and growth Sixth report on economic, social and territorial cohesion* [online]. [cit.2018-01-20]. Available at: [http://ec.europa.eu/regional\\_policy/sources/docoffic/official/reports/cohesion6/6c r\\_en.pdf](http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/cohesion6/6c r_en.pdf).
- [8] European Commission (2017). *EU Action for Smart Villages* [online]. [cit.2018-01-20]. Available at [https://ec.europa.eu/agriculture/sites/agriculture/files/rural-development-2014-2020/looking-ahead/rur-dev-small-villages\\_en.pdf](https://ec.europa.eu/agriculture/sites/agriculture/files/rural-development-2014-2020/looking-ahead/rur-dev-small-villages_en.pdf).

- [9] European Committee of the Regions (2017). *Revitalisation of rural areas through Smart Villages* [online]. [cit.2018-07]. Available at: <http://cor.europa.eu/en/activities/opinions/pages/opinion-factsheet.aspx?OpinionNumber=CDR%203465/2017>
- [10] Fojtíková, L. (2016). Trends in the revealed comparative advantages of the EU member states. *Economic Annals-XXI*, 161(9-10), pp. 7-11.
- [11] Giffinger, R. et al. (2007). *Smart cities: Ranking of European medium-sized cities*. [online]. [cit.2018-01-09]. Available at: [http://www.smart-cities.eu/download/smart\\_cities\\_final\\_report.pdf](http://www.smart-cities.eu/download/smart_cities_final_report.pdf).
- [12] Chourabi, H. (2012) Understanding Smart Cities: An Integrative Framework. In *45th Hawaii International Conference on System Sciences* [online]. [cit.2018-02-09]. [http://observgo.quebec.ca/observgo/fichiers/78979\\_B.pdf](http://observgo.quebec.ca/observgo/fichiers/78979_B.pdf) pp.2289- 2297.
- [13] Kordos, M. (2016). Creative Industry within the European Regional Policy - Effects and Benefits. In *Knowledge for Market Use 2016: Our Interconnected and Divided World*. Olomouc: Palacky Univ, pp. 199-207.
- [14] Kiaušienė, I and Vazonienė, G. (2016). Development of Rural Social Infrastructure Services Promoting Elderly Integration to Society. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp.432 – 442.
- [15] Kyjonková, L. (2014). Regional Disparities and Cohesion in the EU In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp.417 – 424.
- [16] Nowodziński, P (2015). Smart cities as a development factor of the EU In *Medzinárodné vzťahy 2015: aktuálne otázky svetovej ekonomiky a politiky*. [online]. [cit.2018-07]. Available at: [https://fmv.euba.sk/www\\_write/files/dokumenty/veda-vyskum/konferencie/zborniky/Zbornik\\_Smolenice\\_2015.pdf](https://fmv.euba.sk/www_write/files/dokumenty/veda-vyskum/konferencie/zborniky/Zbornik_Smolenice_2015.pdf) pp-539 – 547.
- [17] Nunvářová, S. (2016). European Integration in Rural Areas Through Local Action Groups – Complexity of the Implementation of Local Development in the Czech Republic. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, ICEI 2016 pp. 679 – 688.
- [18] Council of European Union (2013). *Regulation (EU) No 1305/2013 of The European Parliament and of the Council on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005*. [online]. [cit.2018-02-20]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1305&from=SK>.

## Regional Dimension of Cluster Policy: Case Study Slovakia

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### **Abstract**

*Clusters play an important role in developed economies by contributing to the competitiveness of entire region in which they operate. Their support is therefore an integral part of development policies both as Member States as European Union. One of the most important policies appears to be the cluster policy by itself, which can be found at all levels: regional, state and European one. At EU level, cluster policy has been recognized as one of the fundamentals for building EU's competitiveness in world economy and is one of the European Commission's strategic priorities. EU has established its cluster policy to create a suitable environment for clusters development, their financial support and support for their cooperation among science, education and industry. If the EU goals are to be met in this area, it is necessary to initiate these aspects at regional level. The main goal of this paper is to assess selected aspects of cluster policy at the level of individual self-governing regions in Slovak Republic. To achieve this goal, the spider analysis method has been used.*

**Keywords:** cluster policy, European cluster policy, region

**JEL Classification:** O18, R10, R11, R58

### **1. Introduction**

Cluster policy is defined as a specific governmental effort to support clusters. Cluster policy depends not only on the type of clusters, current level of cluster development, but also on the ability to use the appropriate support tools. Ideally, cluster policies solve specific cluster problems. Clusters are an essential tool of regional development, and an essential factor in competitiveness. Competitiveness is a key determinant of business activities (Jašková, 2017; Simo et. al. 2016) In addition, for clusters to be working effectively it is important to create appropriate framework conditions that stimulate the development of companies, as well as their emergence (Karlsson, 2007). Clusters' support also helps to improve relations among key economic actors in region, to activate regional authorities, businesses, and academic environment, and to find ways how to collaborate with these stakeholders effectively (Burger, 2013). Modern cluster policy aims to put in place a suitable business environment, in which key economic actors in region could achieve higher level of research, innovation, entrepreneurship (Duřová Spiřáková et al., 2017), business performance and competitiveness.

This paper deals with assessing the selected aspects of cluster policy at the level of individual self-governing regions in Slovak Republic. To achieve this goal, the methodology of Břusková and Pavelková (2016) was used. This methodology was for first used in V4 project named V4 Cluster Policies and their influence on the viability of cluster organisations.

## 2. Theoretical Background & Literature Overview

Active clustering is fundamental tool for a program of growth that is typical for clusters geared to set a regional well-being. It is important to keep in mind that economic growth in region and reaching out to potential foreign investors can be done only by a successful cluster, which does not just form a "cluster of regional companies". For a cluster to work properly, a number of criteria must be met such as: apart from the priority geographic concentration describing the cluster particularly, there are mainly cooperation, strong links among cluster members, trust and social networks that give the cluster its uniqueness (Pavelková and Jirčíková, 2008). Clusters increase the political-administrative and, of course, economic sphere of the region, and hence its growth in all aspects. Stimulating and supporting the emergence of clusters should be a cornerstone for the strategic development of regions. The positive effects of clusters on the economic development of companies, sectors, regions, but also many countries have resulted in targeted cluster support through the implementation of so-called cluster policies. (Vojtovic, 2016) According to Burger (2013), cluster policies can be categorized into three categories, reflecting their motivation as well as political goals. The first category covers support policies aimed at improving the business environment indirectly stimulating the emergence and dynamism of clusters. The second category includes traditional framework policies, such as industrial policy, SME development policies, research and innovation policies or regional policy. The third category contains policies aimed at creating, mobilizing and improving clusters in specific sectors. This category is considered to be as a typical and strict cluster policy. From a territorial point of view, cluster policy can be seen in several dimensions: regional cluster policy, national cluster policy, European cluster policy and global cluster policy. (Štverková and Mynarzová, 2017). In addition, cluster policies can have different goals from local to meta clusters and can be characterized both by top-down and bottom-up approaches (Ivanova and Kordos, 2017b). Cluster policies may include other policies such as industrial, scientific, technological, educational, regional, as well as export promotion strategy policies (Rouvinen, 1999). Cluster development can also be enhanced through standards implementation. Because of sectoral, regional or national specificities, to create a universal cluster policy is not possible. later life stages of clusters formation; and finally on cluster environment or cluster dynamics. This is confirmed also by Kordos (2016) who argues that the need to establish clusters in the process of globalization and development of large multinational corporations and small and medium-sized enterprises is declared at the level of national policies as well as the EU ones. In general, the support for emergence of new emerging clusters is more complicated than the support for already existing clusters (Karlsson, 2007). Cluster policy, unlike sectoral or industrial policy, should be neutral in terms of industry or type of economic activity. In cluster theory, all clusters are appropriate. Cluster externalities enhancement and spillover effects would increase the productivity and prosperity of any cluster. Thus, the government should not pick among clusters, but should create conditions that support the modernization of all clusters. Cluster policy is thus fundamentally different from sectoral or industrial policy, of which a common mistake is, for example, to focus on favoring certain types of activities or picking up the winners (Kačírková, 2009). If the region wants to stimulate the creation and growth of innovative clusters, the investment into university education, science and research areas is also needed. However, it is important that the orientation of R&D workplaces is relevant to particular clusters (Székely, 2008).

## 3. Problem Formulation and Methodology

The clustering issues in the Slovak Republic take on added significance in last decades. The preliminary precondition for development of clustering processes and clusters is the holistic



conception of cluster policy at national as well as regional level. In Slovakia holistic conception is missing. However, there are more than 20 clusters in Slovakia that were formed on a "bottom-up" principle. Such clusters are also labelled as "natural clusters" because they arise from the bottom up approach (Ivanova and Kordos, 2017a). Their emergence is conditioned by market forces and the incentives for its emergence can be, for example local concentration of production factors; the presence of other businesses in the same industry; the allocation of imputes suppliers, subcontractors, sales channels; the presence of education and research institutions in sector; joint venture companies becoming attractive for investors; skilled labor force concentration and others. The existence of clusters brings changes in regional and national competitiveness. That's why the concept of cluster policy takes on significance also in Slovakia. Although the holistic conception is missing, the basic preconditions for clusters policy creation and development exist in form of various documents and supporting programs. The cluster policy at regional as well as national level should take into account the solution of problems in area of support for business and technological and innovation policy. Study in this paper is focused on analysis these preconditions at regional level. This study is based on methodology of Břusková and Pavelková (2016) with modification at some points. We proceeded this study within the following steps:

Step 1: The analysis of clusters in eight Slovak self governing regions.

Step 2: Search out the existing strategic documents in each region that contained issues of cluster policy.

Step 3. The classification of identified documents within 8 categories of indicators and their incorporation in spider analysis. Each indicator is represented by sub-indicators with points:

1. Durability: 3 points - long term (7 years and more), 2. points - mid-term (3 – 6 years), 1 point - short term (1 -2 years);
2. Autonomy: 3 points - specifically devoted to clusters, 2 points – support of selected area of clusters, 1 point - clusters are generally mentioned in existing strategy, 0 points – the issues of clusters is not incorporated into document;
3. Functionality: 3 points - document is fully implemented, 2 points -document is partly implemented, 0 points - document is not implemented;
4. Viability: 3 points – existence of specific body responsible for cluster policy issues, 2 points - incorporated body in existing government body, 1 point – responsible person, 0 points without specific body responsible for cluster policy issues.
5. Continuity: 3 points – cluster policy issues being a permanent part of the document with regular updated, 2 points – valid for actual programming period resp. Actual and previous programming period, 1 point – valid for previous programming period;
6. Integrity: 3 points – covering clusters in all economic branches, 2 points - covering clusters in main sector of 3 smart specialization areas, 1 point – only selected sector/s is/are supported, 0 point – general mentioned.
7. Complexity: 3 points – support of cluster policy, 2 points – support of cluster activities development, 1 point – support of cluster creation. 0 –points – generally mentioned;
8. Consistency: 3 points – system of cluster performance assessment with defined parameters, 2 points – training scheme for cluster stakeholders , 1 point - the cluster concept awareness building, 0 point - support activities are mentioned only in general.

#### **4. Problem Solution**

In the Step 1 of this research .we found out that in 2017 there were 25 active clusters in Slovak regions. In the project VEGA 1/0953/16 we decided that we will classify the clusters according

methodology of Slovak Innovation and Energy Agency (SIEA) into two groups: technological and tourism. We found out that 19 of active clusters belonged to technology clusters and 6 to tourism clusters. The placement of both groups of clusters in Slovak regions illustrates the Figure 1.

**Figure 1: Placement of Technological and Tourism Clusters in Slovak Regions**



Source: own elaboration (2016-2017)

The division of clusters into stated groups and their regional placement is shown in Table 1.

**Table 1: Clusters in Slovak Regions**

Region	Technological clusters	Clusters of tourism
BA	Danube Knowledge cluster, National Energetic Cluster NEK, ABC - Academic Business Cluster	-
TT	Automotive Cluster Slovakia, Electrotechnical Cluster - West Slovakia, Energetic Cluster - West Slovakia, Cluster for Green and Innovative Technologies Support	
TN	Slovak IT cluster	
ZA	Z@ict	Cluster LIPTOV - association of turism, Cluster Orava, Cluster TURIEC - association of tourism
NR	Slovak Plastic Cluster, Bioeconomy Cluster	Cluster Topoľčany - association of tourism
BB	1st Slovak Engineering Cluster	Cluster of Border Castles
PO	Energetic Cluster of region Prešov, Railway Transport Cluster	
KE	Cluster AT+R, Cluster RADAR, BITERAP, Košice IT Valley	Košice- Tourism

Source: author’s research (2016 -2018), BA - Bratislava, TT - Trnava, TN - Trenčín, ZA- Žilina, NR - Nitra, BB - Banská Bystrica, PO - Prešov, KE – Košice

In Step 2 of this study the analysis of strategic documents related to the regional policy in the cluster concept context was realized. The analysis was realized for programming period 2014-

2020. Within this analysis we focused only on mandatory documents, because at regional level the programmes focused on cluster support are missing. For each of regions selected documents were compared. In Table 2 we can see, if document is present in region or not.

**Table 2: The Presence of Strategic Documents in the Regions**

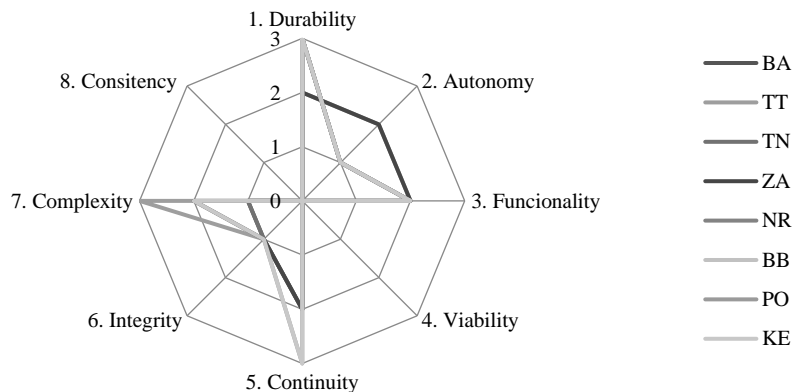
Document	BA	TT	TN	ZA	NR	BB	PO	KE
PESD	x	x	x	x	x	x	x	x
IS	x	x	-	x	x	-	x	x
STD	x	x	x	-	x	x	x	x
RDS	x	x	x	-	x	-	x	-

Source: author’s research (2018) PESD - The program of economic and social development of each self governing region, IS - Innovation strategy of each self governing region, STD - The strategy of tourism development, RDS - Rural development strategy.

Step 3 consists of evaluation of indicators and spider analysis creation. Following figures represent results for each of analysed document.

First types of evaluated documents were the Programs of economic and social development of each self-governing regions. The realized analysis of these documents (Figure 2) in Slovak regions showed differences in indicators 2., 5. and 7. In the context of cluster policy issues the most elaborated PESD documents are in Trnava and Košice region.

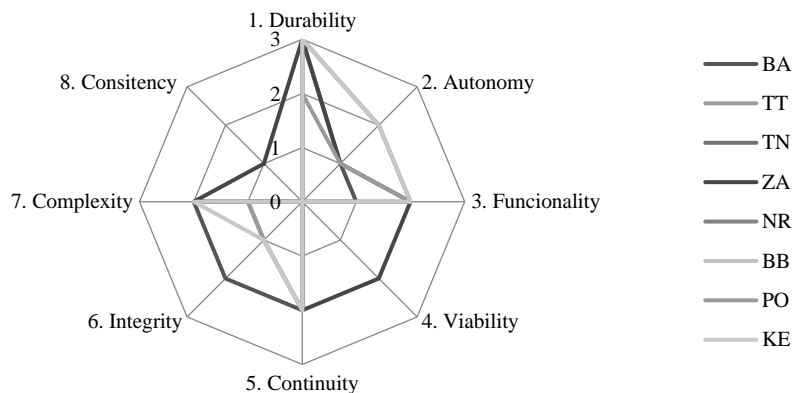
**Figure 2: Spider Analysis of PESD Documents in the Context of Cluster Policy in the Slovak Regions**



Source. Author’s research (2018)

Second type of evaluated documents were documents contained issues of Innovation strategy of each self governing regions. The results are presented in Figure 3. During the evaluation of these documents we found out, that in regions Trnava, Trenčín and Banská Bystrica the actual conception of this strategic document is missing. The concept of cluster policy issues was elaborated in IS documents in a broader context in Žilina, Nitra and Košice region, due to the fact that in these regions the functional clusters are well established. Differences among compared indicators are mainly in case 1., 2. and 7.

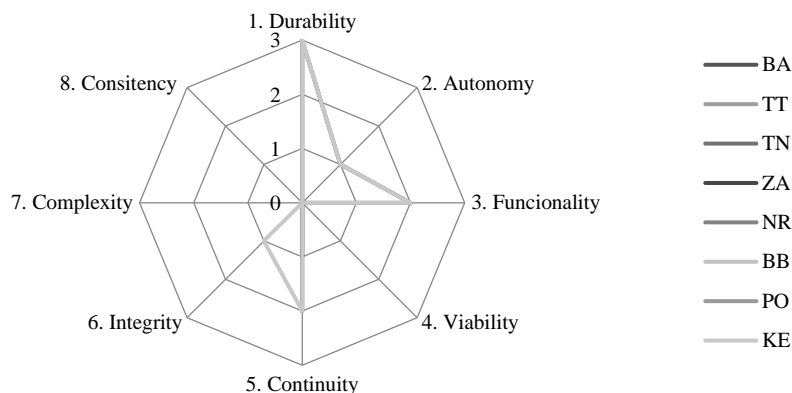
**Figure 3: Spider Analysis of IS Documents in the Context of Cluster Policy in the Slovak Regions**



Source. Author’s research (2018)

Third evaluated types of documents were documents that contain the Strategy of tourism development in each self-governing region (Figure 4). From realized analysis follows that only Košice and Trenčín region have this type of strategic document elaborated, but the issues of clusters is incorporated only in generally and minimal. The reason is that at this programming period the tourism clusters are transformed into new form – regional tourism organizations, which have better support than in form of cluster. Differences among compared indicators are mainly in case 1., 3. and 5.

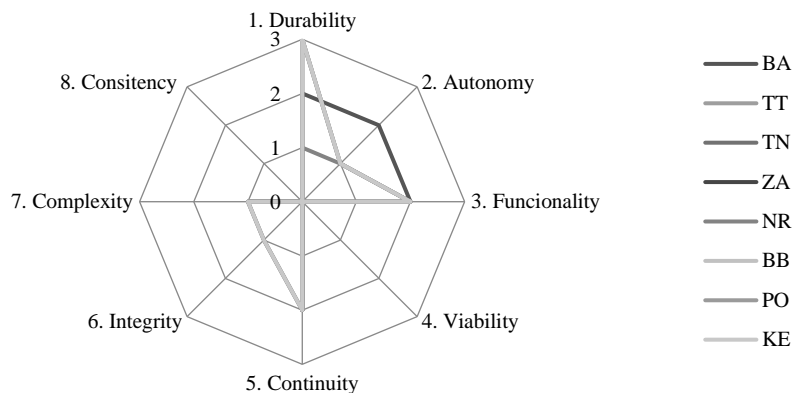
**Figure 4 Spider Analysis of STD Documents in the Context of Cluster Policy in the Slovak Regions**



Source. Author’s research (2018)

The issues of cluster policy are also elaborated in strategic documents that have connection with strategy of Rural development. The analysis of fourth type of documents presents figure 5. This type of document is elaborated in regions Bratislava, Trenčín, Nitra, Prešov and Košice. The highest focus on cluster policy issues is mainly in Košice and Bratislava regions. Differences among compared indicators are mainly in case 1., 2., 3. and 5.

**Figure 5: Spider Analysis of RDS Documents in the Context of Cluster Policy in the Slovak Regions**



Source. Author's research (2018)

## 5. Conclusion

The establishment and development of clusters in Slovakia is seen as a chance how to enhance economic growth in regions and eliminate discrepancies among them. Clustering helps the region become competitive. In addition to regional competitiveness, it also helps Slovak entrepreneurs to foster their business within small and medium-sized companies' environment. For improving of cluster situation in this programming period, the Slovak self governing regions elaborated issues of cluster policy in main strategic documents that have connection with areas in which Slovak clusters provide their activities. As showed the results of this study, the level of cluster policy application at regional level is still low. The best results obtain documents in indicator 1. Durability and 5. Continuity. In indicator 2. Autonomy, the documents obtain in most cases value 2 points, because support of clusters was oriented only on specific economic branch that prevails in region. The documents are implemented only partially (indicator 3. Functionality). The indicator 4. Viability obtain value of 2 points in Žilina region for document - Innovation strategy of each self governing region. Mostly all documents were elaborated also in previous period and some of them contained the issues of cluster policy. That's why the value of 2 points is prevailing. Only Innovation strategy of Bratislava region covers clusters in main sector of 3 smart specialization areas, the rest of documents in mostly cases obtained 1 point – only selected sector/s is/are supported. If documents contained cluster policy issues, these were mentioned only in general (7. Complexity) and also the same apply to support activities (8. Consistency). The analysis of cluster policy in Slovak regions showed, that clusters play important role in regional development also in Slovak Republic, but their support in any direction is still at low level despite the fact, that issues of cluster policy are elaborated in main strategic documents.

## Acknowledgements

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## References

- [1] Břusková, P., Pavelková, D. V4 cluster policies and their influence on the viability of cluster organisations. Methodology guide, 2016.
- [2] Burger, P. (2013): Klastre ako nástroj na zvýšenie konkurencieschopnosti regiónov v Európskej únii. Region Direct, vol. 6, iss. 2, pp. 4 – 28.
- [3] Duřová Spišáková, E., Mura, L., Gontkovičová, B., Hajduová, Z. (2017). R&D in the context of Europe 2020 in selected countries. Economic Computation and Economic Cybernetics Studies and Research, vol. 51, iss. 4., pp. 243 – 261.
- [4] Ivanova, E. and Kordos, M. (2017b). Innovation Policy of SMEs in Slovakia in the Context of European Union Innovation Policy. Marketing And Management Of Innovations, iss. 3, pp. 213-225. DOI: 10.21272/mmi.2017.3-20
- [5] Ivanova, E. and Kordos, M. (2017a). Competitiveness and Innovation Performance of Regions in Slovak Republic. Marketing And Management Of Innovations, iss. 1, pp. 145-158. DOI: 10.21272/mmi.2017.1-13
- [6] Jašková, D. (2017) Multicriteria decision making in assessing the region's potential for cluster formation. Znalosti pro trzni praxi 2017: Zeny - podnikatelky v minulosti a soucasnosti, pp. 1020-1027
- [7] Kačírková, M. (2009): Formovanie spolupracujúceho regionálneho inovačného prostredia. [Working Papers, č. 18.] Bratislava: Ekonomický ústav SAV. ISSN 1337-5598.
- [8] Karlsson, Ch. (2007). Clusters, Functional Regions and Cluster Policies. [CESIS, Electronic Working Paper Series. 2007, No. 84.] Stockholm: Centre of Excellence for Science and Innovation Studies.
- [9] Kordos, M. (2016). Common Aspects of the European Union Cluster and Competition Policies. In Proceedings of the 1st International Conference Contemporary Issues in Theory and Practice of Management: CITPM 2016, pp. 210-215
- [10] Pavelková, D. and Jirčíková, E. (2008). Klastry jako nástroj zvýšení konkurencieschopnosti firem. Ekonomie a management, vol. 11, iss. 3, pp. 63-72 .
- [11] Rouvinen, P. and Ylä-Anttila, P. (1999). Finish Cluster Studies and New Industrial Policy Making: In: Boosting Innovation The Cluster Approach. Paris: OECD, pp. 361 – 380.
- [12] Simo, D., Mura, L., Buleca, J. 2016. Assessment of milk production competitiveness of the Slovak Republic within the EU-27 countries. Agricultural Economics-Zemedska Ekonomika, vol. 62, iss. 10, pp. 482-492.
- [13] Székely, V. (2008). Regionálne priemyselné klastre a problémy (nielen) s ich identifikáciou. Ekonomický časopis/Journal of Economics, vol. 56, iss. 3, pp. 223 – 238.
- [14] Štverková, H., Mynarzová, M. (2017) Cluster Initiatives in the Context of the BEE model. Forum Scientiae Oeconomia. Volume 5, 59-69
- [15] Vojtovic, S. (2016) Creative clusters and their importance for regional development. In 3<sup>rd</sup> International Multidisciplinary Scientific Conference on Socil Sciences and Arts. SGEM 2016. Pp. 799 -806.

## **The Involvement of Enterprises in Clusters as a Basis for the Internationalization of Business Activities on the Example of Slovak Small and Medium-sized Enterprises**

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### **Abstract**

*Small and medium-sized enterprises (SMEs) play a significant role in the performance of the EU's economies. Due to the size of the domestic market, SMEs that try to maximize profits or gain competitive advantages have almost the need to engage in the internationalization process. The networking approach to internationalization is based on the fact that penetration into foreign markets depends not only on the competitive advantages of the company but also on the creation and involvement of the company in strategic alliances and networks. Cooperation among members of the network is mutually beneficial to all members and synergistic effects are achieved there. One of the network approaches is the cluster cooperation. The article discusses the issues of the internationalization of entrepreneurial activities through the prism of Slovak SMEs that are considering the potential involvement into the clusters. The main aim of the paper is to identify the basic reasons for enterprise entry into the network from point of view of the risks in the context of the internationalization of business activities.*

**Keywords:** *cluster, entrepreneurial activities, international business, small and medium-sized enterprises*

**JEL Classification:** *F23, M21, M22*

### **1. Introduction**

There are many theoretical approaches and models of internationalization of companies in literature dealing with internationalization. As stated by Fonfara (2011), to understand the process of internationalization of a company, it is necessary to identify and study its network of relationships with all entities, including customers, distributors, suppliers and competitors. For the purpose of the article, the so-called “Network Access to Internationalization” was chosen. This is based on the fact that penetration into foreign markets depends not only on the competitive advantages of the company but also on the creation and involvement of the company in strategic alliances and networks. As Balog (2016) stated, network organizations are more effective, more flexible than hierarchical, and more resistant to external influences. An important prerequisite for business development, especially for SMEs, is, therefore, the creation of networks and strategic partnerships. One of the networking approaches is cluster

collaboration. Business involvement in clusters is the foundation for the internationalization of business activities (Mura et al., 2017). The significant stakeholders for cluster cooperation represent the SMEs, which are considered to be the economic pillars and the driving force behind innovation, employment and social integration (Lemanska-Majdzik, Okreglicka and Gorzen-Mitka, 2016; Dziwiński, 2016; Kabus, 2017). 99.8% of enterprises operating in the EU-28 non-financial sector in 2016 were small and medium-sized enterprises. These SMEs employed 93 million people, accounting for 67% of total employment in the EU-28 non-financial sector and 57% of value added in the EU-28 non-financial sector (European Commission [online], 2017a). Also, data for SMEs in Slovakia indicate that they are also an important pillar and a stabilizing factor for the economy of the country and its regions. SMEs contribute significantly to the non-financial business economy in Slovakia, which represented 54.4% of total value added and 72.1% of total employment in 2016 (European Commission [online], 2017b). Empirical studies also show that SMEs tend to grow faster than their larger counterparts (Fiala and Hedija, 2015). Small and medium-sized enterprises could also benefit from clusters and facilitate a broad distribution of know-how, innovation, knowledge and process sharing, and so on (Piperopoulos, 2012; Barcik, 2016; Durkalić, 2016; Barcik and Jakubiec, 2016). SMEs are the most represented category of clusters' members in Slovakia – this category consists of 49 % of all members in clusters. But as follows from preliminary results of scientific project VEGA 1/0918/16 Risk management of SMEs in the context of clusters' involvement activities in the Slovak Republic, among SMEs still missing the awareness of cluster cooperation. But after explanation of the principle of cluster cooperation, they could identify the importance that potential cluster cooperation might have for them. In this context, the main aim of this paper was stated and also the issues of internationalization of business activities were taking into account.

## 2. Theoretical Background

The issue of internationalization of business activities became the subject of the investigation of many researchers who were involved in formulating the theory of internationalization. Within these theories, the evolutionary approach and the global approach can be distinguished. The evolutionary approach underlying this research also assumes that companies are progressing into internationalization at certain stages. The internationalization of the enterprise appears to be a gradual process of accumulating the necessary resources needed to overcome uncertainties in international markets (Zapletalová, 2011; Janatka et al., 2017). These models assume that businesses are growing on the domestic market and that they are beginning to develop their export activities. We can include the Uppsala Model and the I-model as the main representatives of the evolutionary approach. Uppsala Internationalization Model was created by Johanson and Vahle in the 70s of the 20th Century. Their work has probably also been the inspiration for the development of the Innovation-Related Internationalization Models (I-models), which explain the internationalization process in terms of innovation. The models included in the I-model group explain mainly the development of export activities in SMEs. Both the U-models and the I-models can be regarded as behaviorally oriented. Based on the arguments by Andersen (1993), the gradual pattern of the firm's internationalization process can mainly be attributed to two reasons: the lack of knowledge by the firm, especially "experiential knowledge," and uncertainty associated with the decision to internationalize.

There are a number of different approaches explaining the internationalization of business activities. Kauppinen and Juho (2012) divide internationalization theory into process theory, network theory, the resource-based view and international entrepreneurship theory. Companies can work together on a vertical or horizontal level, that is, with competitors entering into networking relationships. Network Access to Internationalization was created in



1988 by Johanson and Mattson, who came to the conclusion that the degree of internationalization of an enterprise depends on both the networks created by the enterprise and the position of the enterprise in that network. They assumed that the network is a key factor in a company's development and is crucial in achieving its long-term goals (Fonfara, 2011). As Zapletalová (2015) says, the networking perspective provides resources for internationalization and offers an extra view of available resources. This model of internationalization is based on the claim that the network of which the enterprise is a part must provide the necessary resources for internationalization. If a business relationship can be understood as a network, it can be argued that companies are internationalizing because they are internationalizing businesses in the network. The networking model for internationalization is appropriate for explaining the internationalization of SMEs, because networking enables businesses to overcome problems with lack of knowledge, technology and capital (Ruzzier and Antoncic, 2007).

In this paper we described the principle of network theory and its place in internationalization of business, because the clusters work on its philosophy. The clusters are groups of independent companies (start-ups, small, medium and large enterprises and research organizations) acting in a specific area, in order to stimulate innovative activity by promoting intensive interactions, the use of common facilities, exchanges of experience and knowledge by contributing to technology transfer, networking and information dissemination among the clusters enterprises (Havierníková, Jašková and Krajňáková, 2016). According to Kordoš (2016) firms that are located within a cluster can transact more efficiently, share technologies and knowledge more readily, operate more flexibly, start new businesses more easily, and perceive and implement innovations more rapidly. Internationalization of clusters is necessary for their activities or even the very existence. The level of these activities has a significant impact on the competitiveness of the cluster-integrated companies (Pavelková et al, 2015; Kordoš, 2015; Jankowska and Glówka, 2016). There are dozens of reasons for SMEs to join the cluster cooperation, reasons relating to the internalization of business including. On the opposite site, although the cluster cooperation brings many opportunities for business, it is associated with risk as well. There are many scientific articles on risk management in business and SMEs, but very few researchers have reported on risk management in various form of network and cluster cooperation (Xia and Chen, 2011; Fazli, Mavi and Vosooghizaji, 2015). According Havierníková, Okreglicka and Lemanska-Majdzik (2016) in particular, economic, financial, technical and political categories of risk are important for SMEs in the context of cluster cooperation and have an impact on the business environment. The most important categories of risk are mainly market, political and technical risks. Market and trade risks are very important in case of SMEs' internalization of business. In the view of above stated, the study in this paper was focused on issues of reasons that motivate SMEs for join the cluster cooperation and assessment of trade and market risks by SMEs, if they are interested in the cluster cooperation.

### **3. Problem Formulation and Methodology**

Due to the needs to fulfill the main aim of this paper, we focused on the evaluation of selected questions that related to the identification of reasons and risks for join the clusters in the context of the internationalization of business activities. We focused on market and trade risks, which are the most relevant to the internalization of business. In developing this paper, two scientific hypotheses were established: *1<sup>st</sup> hypothesis*: The most important reasons that motivate small and medium entrepreneurs to enter into the cluster are not significantly determined by the size of the enterprise. In this research, the reasons were defined as follows: R1. The increasing of employment. R2. The increasing of number of innovation. R3. Common

projects in the area of doing business. R4. Common projects in the area of human resources. R5. The location in new markets. R6. The increasing of competitiveness. R7. Obtaining of new contacts. *2<sup>nd</sup> hypothesis*: The level of risk factors in the context of join cluster does not depend on the size of the enterprise. Entrepreneurs assessed the following risks factors: RF1. The competition. RF2. The logistic. RF3. The quality of products. RF4. The compliance with times of delivery towards the customer. RF5. Economic development. RF6. The sector in which the business operates. RF7. Partners. RF8. The subcontractors. RF9. The changes in energy prices. RF10. The changes in raw material prices.

To evaluate the established scientific hypotheses, the Chi-square test was used. See also Grencikova et al. (2017). For calculation, the program Statistica 6.0 was used.

Test statistic

$$\chi^2 = \sum_{i=1}^m \sum_{j=1}^n \frac{(f_{b_n} - f_{e_n})^2}{f_{e_n}} \quad (1)$$

By this test statistic, we test null hypotheses H0 about no association between two variables against alternative hypothesis H1 about the association between two variables. A large size of the  $\chi^2$  statistic indicates that the observed data are unlikely under an assumption of no association between observed variables. The low level of p-value <0,05 means - H0 is rejected and we accept the alternative hypothesis H1. Large probability (p-value>0,05) means the opposite. To measure the dependence of pairs of variables, the Cramer's V coefficient was used, which can achieve values from 0 to 1. Dependence less than 0.1 is trivial, 0.1-0.3 small, 0.3-0.5 medium and above 0.5 is great. If the value of the coefficient is closer to 1 the dependence between the two qualitative characters is stronger and vice versa (Budíková et al., 2010).

#### 4. Problem Solution

The questionnaire surveys were realized among 250 Slovak SMEs from 8 self-governing regions: Bratislava – BA, Trnava – TT, Trenčín – TN, Nitra – NR, Žilina – ZA, Banská Bystrica – BB, Prešov – PO, Košice – KE. The structure of respondents presents table 1.

**Table 1: Structure of Respondents (%)**

Sized categorization	BA	TT	TN	NR	ZA	BB	PO	KE	Total
less than 10 employees	4.02	1.20	18.88	2.01	4.82	0.40	3.61	1.20	36.14
from 10 to 49 employees	4.82	6.02	12.45	1.61	5.22	0.40	3.61	1.20	35.34
from 50 to 249 employees	2.01	2.81	11.24	0.40	6.43	0.80	3.61	1.20	28.52
<b>Total</b>	10.84	10.04	42.57	4.02	16.47	1.61	10.84	3.61	100

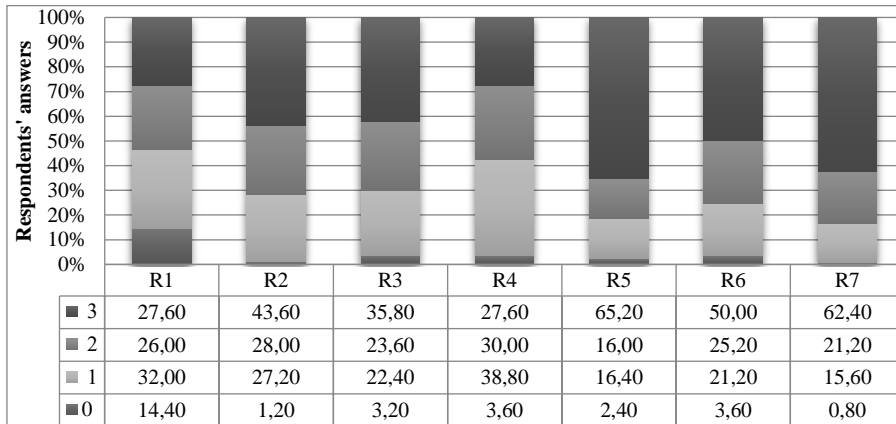
Source: author's research and calculations

The most of the respondents operate in Trenčín region, the lowest number in Banská Bystrica region. The most respondents (36,14%) employee less than 10 employees. There is a specific typology of clusters in Slovakia. Clusters are divided into two groups: tourism and technological. For achieving of the main aim of this paper, we focus on enterprises that operate

in the areas of technology clusters (machinery industry, electrotechnical industry, agriculture, KET industry, research and development, IT and others).

For the needs of this paper, seven reasons for cluster’s engagement in the context of internalization of business were chosen. SMEs’ assessed each reason by Likert scale: 0 - insignificant reason, 5 – the most important reason. Due to the rules of Chi-square test according which the expected variables must be higher than value 5 in 80% of cases, it was necessary to group the obtaining results of questionnaire surveys. The respondents’ answers of value 1 – very low importance was grouped with value 2 – low importance and answers with value 5 – the highest importance were grouped with value 4 – high importance. The percentage of respondent’s answers in grouped categories presents figure 1.

**Figure 1: The Assessment of Reasons for Cluster’s Engagement (%)**



Source: own elaboration (2018)

The results of Chi-square statistics calculated for 1<sup>st</sup> hypothesis are presented in table 2. The H0 was rejected only for reasons R1 and R5. It means that between the reason and answers according to the size of the enterprise is association. The results of Cramer’ V showed the only small level of dependence. For the rest, we can conclude that between the size of the enterprise and by indicating the reason is not association doesn’t determine the reasons that motivate small and medium entrepreneurs to enter into the cluster.

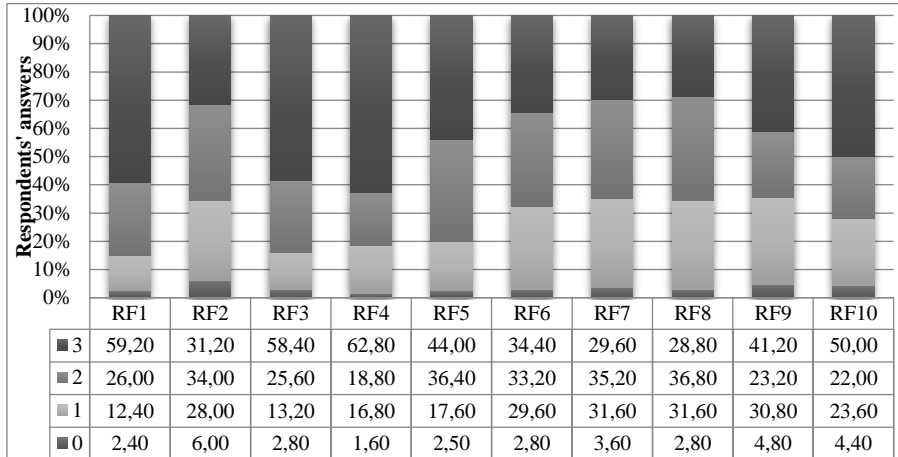
**Table 2: The Results of Chi-square Statistics and Cramer’ V - 1<sup>st</sup> Hypothesis**

Reason	Results of chi sq. statistics	Cramer’ V
<b>R1</b>	<b>Pearson Chi Sq.: 12,8036, df=6, p=,046272</b>	<b>0,1600226</b>
<b>R2</b>	Pearson Chi Sq.: 3.06823, df=6, p=.800234	0.0783356
<b>R3</b>	Pearson Chi Sq.: 11.85339, df=6, p=.06533	0.1539701
<b>R4</b>	Pearson Chi Sq 5.531068, df=6, p=.47771	0.1051767
<b>R5</b>	<b>Pearson Chi Sq.: 18.8307, df=6, p=.004462</b>	<b>0.1940657</b>
<b>R6</b>	Pearson Chi Sq.: 8.96883, df=6, p=.175351	0.1339316
<b>R7</b>	Pearson Chi Sq.: 4.52169, df=6, p=.606449	0.0950967

Source: own elaboration (2018)

Similar situation with a grouping of evaluation of respondents' answers was also in case of risk factors for trade and market risks. The percentage of respondents answers present figure 2. Value 0 means that risk factor is not relevant for the enterprise, value 3 – most important risk factor.

**Figure 2: The Assessment of Risks Factors for Cluster's Engagement (%)**



Source: own elaboration (2018)

The results of Chi-square statistic for 2<sup>nd</sup> scientific hypothesis showed, that H0 was rejected for RF2, RF4 and RF8. It means that between the type of risk factor and size of the enterprise is an association, but as we can see the results of Cramer' V, this dependence is small.

**Table 3: The Results of Chi-square Statistics and Cramer' V – 2<sup>nd</sup> Hypothesis**

Reason	Results of chi sq. statistics	Cramer' V
<b>RF1</b>	Pearson Chi Sq.: 6.26937, sv=6, p=.393709	0.1119765
<b>RF2</b>	<b>Pearson Chi Sq.: 12.7610, sv=6, p=.047002</b>	<b>0.1597561</b>
<b>RF3</b>	Pearson Chi Sq.: 4.85162, sv=6, p=.562983	0.0985050
<b>RF4</b>	<b>Pearson Chi Sq.: 19.8086, sv=6, p=.002997</b>	<b>0.1990405</b>
<b>RF5</b>	Pearson Chi Sq.: 8.06949, sv=6, p=.233068	0.1270393
<b>RF6</b>	Pearson Chi Sq.: 7.54834, sv=6, p=.273105	0.1228685
<b>RF7</b>	Pearson Chi Sq.: 6.00289, sv=6, p=.422873	0.1095709
<b>RF8</b>	<b>Pearson Chi Sq.: 13.9079, sv=6, p=.030690</b>	<b>0.1667807</b>
<b>RF9</b>	Pearson Chi Sq.: 4.14280, sv=6, p=.657359	0.0910253
<b>RF10</b>	Pearson Chi Sq.: 9.82434, sv=6, p=.132260	0.1401737

Source: own elaboration (2018)

### 5. Conclusion

The network approach is a new promising theoretical framework that is applied to the internationalisation of SMEs. Studies relating networks to internationalization are relatively new to the field. Such studies seek to shed new light on entrepreneurial activities, including internationalization. The results of our study in this paper showed, that SMEs' perception of reasons and risks for involvement in cluster cooperation are various and depends for each

reason and risk factor separately. The paper was focused on assessment of reasons and risks that could have a connection with the internalization of business. As the most important reasons in this context were signed by SMEs the reasons R5. The location in new markets. R6. The increasing of competitiveness. R7. Obtaining of new contacts. Respondents' answers showed that most important risk factors are presenting by RF1. The competition, RF3. The quality of products and RF4. The compliance with times of delivery towards the customer. The cluster concept is a new phenomenon that could contribute for SMEs also in the area of internationalization of their business, that's why we propose to raise the awareness about this concept among Slovak SMEs and contribute to their development by using various tools in national as well as regional cluster policy.

### **Acknowledgements**

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### **References**

- [1] Andersen, O. (1993). On the Internationalization Process of Firms: a Critical Analysis. *Journal of International Business Studies*, vol. 24, iss. 2, pp. 209-231.
- [2] Balog, M. (2016). Development Factors of Cluster Organizations in the Slovak Republic. *Ekonomický časopis*, vol. 64, iss. 2, pp. 149-168.
- [3] Barcik, A. (2016). Co-opetition of Enterprises in Terms of the European Competition Policy. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 65–71.
- [4] Barcik, R. and Jakubiec, M. (2016). Chosen aspects of company's competitiveness in the context of its growth. In Sroka, W. *Zarządzanie współczesnym przedsiębiorstwem: uwarunkowania, trendy, perspektywy*. Torun: TNOiK, pp. 101-114.
- [5] Budíková, M., Králová, M. and Maroš, B. (2010). *Průvodce základními statistickými metodami*. Praha: Grada Publishing.
- [6] Durkalić, D. (2016). Impact of trade openness on economic development: case from Serbia. *Acta Oeconomica Universitatis Selye*, vol. 5, iss. 2, pp. 79-87.
- [7] Dziwiński, P. (2016). Restructuring of Small and Medium-Sized Enterprises – the European Perspective. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 190–196.
- [8] European Commission (2017a). *Annual Report on European SMEs. Focus on self-employment* [online]. [cit.2018-02-19]. Available at: <https://ec.europa.eu/docsroom/documents/26563>.
- [9] European Commission (2017b). *2017 SBA Fact Sheet Slovakia* [online]. [cit.2018-02-19]. Available at: <https://ec.europa.eu/docsroom/documents/26562>.
- [10] Fazli, S., Mavi, K. R. and Vosooghizajji, M. (2015). Crude oil supply chain risk management with DEMATEL-ANT. *Operational Research*, vol. 15, iss. 3, pp. 453-480.

- [11] Fiala, R. and Hedija, V. (2015). Gibrat's law and empirical studies, In *10th International Scientific Conference Financial management of Firms and Financial Institutions*. Ostrava: VŠB-TU of Ostrava, Faculty of Economics, pp. 254-262.
- [12] Fonfara, K. (2011). A typology of company behavior in the internationalization process (a network approach). *Poznan University of Economics Review*, vol. 11, iss. 2, pp. 5-25.
- [13] Grecnikova, A., Spankova, J. and Habanik, J. (2017). Regional Disparities in Labor Force Migration abroad in Slovak Republic and in Czech Republic. In *Economics & Sociology*, vol. 10, iss. 3, pp. 81-89.
- [14] Havierníková, K., Jašková, D. and Krajňáková, E. (2016). The Evaluation of Regional Competitiveness in the Context of Cluster Potential. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 326–334.
- [15] Havierníková, K., Okreglicka, M. and Lemanska-Majdzik, A. (2016). Cluster Cooperation and Risk Level in Small and Medium-Sized Enterprises. *Polish Journal of Management Studies*, vol. 14, iss. 2, pp. 82-92.
- [16] Janatka, F. et al. (2017). *Podnikání v globalizovaném světě*. Praha: Wolters Kluwer ČR.
- [17] Jankowska, B. and Glówka, C. (2016). Clusters on the road to internationalization – evidence from a CEE economy. *Competitiveness Review*, vol. 26, iss. 4, pp. 395-414.
- [18] Kabus J. (2017). Development of Entrepreneurship with Support of Local Self-Governments, on the Example of Belchatow County. *Zeszyty Naukowe Politechniki Częstochowskiej*, vol. 27, iss. 1, pp. 162-171.
- [19] Kauppinen, A. and Juho, A. (2012). Internationalisation of SMEs from the perspective of social learning theory. *Journal of International Entrepreneurship*, vol. 10, iss. 3, pp. 200-231.
- [20] Kordoš, M. (2015). EU Cluster Policy Aspects within the Strategy 2020. In *International Scientific Conference on Knowledge for Market Use – Woman in Business in the Past and Present*. Olomouc: Palacky University, pp. 398-405.
- [21] Kordoš, M. (2016). Common Aspects of the European Union Cluster and Competition Policies. In *Czestochowa: Czestochowa University of Technology, Faculty of Management*, pp. 210–215.
- [22] Lemanska-Majdzik, A., Okreglicka, M. and Gorzen-Mitka, I. (2016). In *International Business-Information-Management-Association Conference*. Seville: Soliman, pp. 1090-1099.
- [23] Mura, L., Ključnikov, A., Tvaronavičiene, M. and Androniceanu, A. (2017). Development Trends in Human Resource Management in Small and Medium Enterprises in the Visegrad Group. *Acta Polytechnica Hungarica*, vol. 14, no. 7, pp. 105 – 122.
- [24] Pavelková, D., Bednar, P., Bialic-Davendra, M. and Knapková, A. (2015). Internationalization Activities of the Cluster Organisations: Factors which Influence them. *Transformations in Business & Economics*, vol. 14, iss. 3C (36C), pp. 316-332.

- [25]Piperopoulos, P. G. (2012). *Entrepreneurship, Innovation and Business Clusters*. London: Gower Publishing.
- [26]Ruzzier, M. and Antoncic, B. (2007). Social Capital and SME Internationalization: an Empirical Examination. *Transformations in business & Economics*, vol. 6, iss. 1(11), pp. 1648-4460.
- [27]Xia, D. and Chen, B. (2011). A comprehensive decision-making model for risk management of supply chain. *Expert Systems with Applications*, vol. 38, iss. 5, pp. 4957-4966.
- [28]Zapletalová, Š. (2011). Vybrané evoluční teorie procesu internacionalizace podnikatelských aktivit. *Acta Academica Karviensia*, vol. 1, iss. 3, pp. 186-194.
- [29]Zapletalová, Š. (2015). *Podnikání malých a středních podniků na mezinárodních trzích*. Praha: Ekopress.

## Health-conscious Behaviour Appearance in the European Union

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### **Abstract**

*During the last decades, among the challenges of future sustainable development the transforming of consumption pattern has got more and more attention. The main reason of it the twin characteristic of consumption, its relationship with human well-being and its effect on natural resources contributing to a number of environmental problems. Considering the rapidly changing environment raising health awareness and preventing the most frequently occurring chronic diseases have become more and more important both in individual and society level. Therefore, health-conscious behaviour has numerous components such as health status of population, health care system performance or risk factors for health. The current paper is intended to summarize the related literature and offers a brief introspection into the current situation of Hungary's health status – compared with EU. The research methods are: analysis of different related articles and reports, examination of current situation in Hungary and European Union based on OECD Health Statistics and European Commission Reports.*

**Keywords:** consumer behaviour, European Union, health awareness, sustainability

**JEL Classification:** I12, I14, I31, N34

### **1. Introduction**

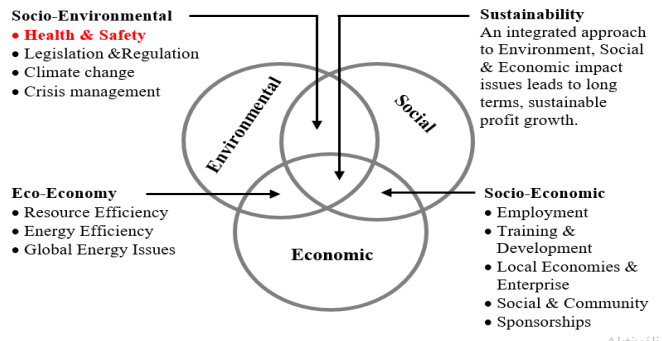
In the last few decades, attention to sustainability or sustainable development is increasing – more and more researchers started to deal with this area. Original definition of sustainability derives from the Brundtland Report of 1987 which said that “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (WCED, 1987). Similarly to the original concept, major part of researchers evaluate the sustainability in a traditional way – they started out from the side of production and use of resources, and are mainly connected to its different dimensions. For example, Daly (1996) defined sustainable development as “development without growth beyond environmental limits.” Keszi Szeremlei and Magda (2015) provided a wider description, however, still remaining the production side – according to them sustainability comprises of production and utilization that are sustainable from environmental, social and economic aspects as well as of the highest level of energy efficiency that current technology allows.

Nevertheless, recently a more practical and detailed approach has spread which said that sustainability is simply the ability to continue a well-defined behaviour indefinitely without the degradation of natural, physical, human, and intellectual capital (Crittenden et al. 2011). Despite of many different definitions it is clear that sustainability is universally thought to have the following three components as pillars: environment, society and economy. Moreover it is



also true, that nowadays researchers have not been talking about only three well-known main categories, but also the following sub-dimensions can be evaluated – expanding the original structure and starting out from the side of consumers: socio-economic (common section of social and economic dimensions), socio-environmental (as the common section of social and environmental dimensions), and eco-efficiency (as the common section of economic and environmental dimensions) as can be seen in Figure 1.

**Figure 1: Pillars of Sustainability**



Source: Own edition based on Barcan (2016)

There is no doubt that sustainable consumption is a megatrend influencing consumer habits today (Szakály et al. 2015). It is also a fact that attention to health conscious consumer behaviour in terms of sustainability is more and more increasing. Consumer behaviour means not only the consumption of physical goods but also the services related to the lifestyle. Thus, health conditions and healthy lifestyle are also considerably linked to sustainability.

The main objective of this paper is to find the role of smart lifestyle in health promotion and disease prevention in terms of sustainability through the related literature. Moreover, the study also offers a brief introspection into the situation of Hungary compared with the European Union in terms of health conscious behaviour through the most recent reports of European Commission. In analysis this particular paper primarily focuses on the different determinants of health which are in relation to environmental issue of health, nutrition and healthy lifestyle.

## 2. Problem Formulation and Methodology

Since the 1980's, the issue of sustainability has been given more and more attention. Through the information society came to the fore, and all elements of our environment change rapidly, knowledge transfer has a continuously increasing role – not only in our daily life but in long term consumer patterns. Due to the changing and expanding concept of sustainability researchers determined and evaluated new sub-dimensions which are significantly connected to the economic and social well-being. As a loop, also health and healthy lifestyle are important components of well-being and they have a huge impact to the sustainability itself. Therefore, most important health issues are related to all pillars of sustainability – they have different economic, environmental and social effects. The increasing cost of health promotion, disease prevention and the results of nutritional and health research have fundamentally changed also the consumer's needs and habits. There is also a growing understanding that investing in population health is not only valuable in and of itself, but contributes to economic growth and social inclusion (OECD/European Observatory on Health Systems and Policies, 2017a).

Therefore, it is necessary to evaluate the different health issues in relation to environmental problems, nutrition and lifestyle.

The current paper is intended to summarize the most important related literature and provide a better understanding of healthy lifestyle and health conscious behaviour in terms of sustainability. Furthermore, the study offers a brief introspection into the current situation of Hungary's health profile and status – compared with the European Union. The research methods are the analysis of different related articles and reports in order to demonstrate the most important determinants of health in Hungary and European Union based on the reports and data published by the OECD/European Observatory on Health Systems and Policies and the European Commission (Eurostat).

### 3. Problem Solution

In order to understand the role of health in achieving the reformulated sustainable goals of the United Nations, it is necessary to know the most important definitions in relation to health and public health system. Namely, “the 2030 Agenda for Sustainable Development aims to shape a very different world. The factors that now govern the well-being of the human condition, and the planet that sustains it, are no longer so discrete.” (Chan, 2016)

Health is not only the lack of diseases as most people guess. Although health has a lot of different approaches, the most integrated, accepted and commonly used definition of health was defined by the World Health Organization (WHO) in 1948. According to the Preamble to the Constitution of the WHO: “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.” (WHO, 2006). Health awareness or health-conscious behaviour is all of the individual attitudes, behaviours and activities in order to live longer and remain healthier (WHO, 2016).

The key pillars of health promotion can be found primarily in our lifestyle. According to the statement of World Health Organization (WHO) main causes of premature mortality are mainly the lifestyle (43%), then the environment (23%), the genetic conditions (25%) and the healthcare system (only 11%) (WHO, 2001). However, in order to maintain our health, in addition to above, we have to count on several other factors – for example work and life conditions (stress level, relationships with others, more or less supporting environment), our mental health, our skills or our behaviour patterns to the environment. Furthermore, income, education, working and living conditions can be also important factors – with a sufficient income consumers can purchase more healthy and nutritious goods, though higher income can cause more stress because of longer working hours and responsibility (Fuchs, 2004). Similarly, education or living conditions can influence the health status – more educated people may be better informed about health-seeking activities and can access more health care activities (Mackenbach et al. 2008), or living in an unsafe and unsanitary environment can raise the risk of different chronic diseases or death (Gibson et al., 2011; Deguen and Zmirou-Navier, 2010).

Chronic diseases are defined by the WHO as “noncommunicable diseases” or “diseases of long duration and generally slow progression” (WHO, 2013). Different chronic diseases are currently the leading causes of the mortality and disability in developed countries. The consequences of chronic diseases are very serious: forecasts demonstrate that the population aged over 65 will rise from 87.5 million in 2010 to 152.6 million in 2060, and chronic diseases has significant effect more than 80% of people in these ages (European Commission, 2013). According to the European Commission people in OECD countries are living longer, but the burden of mental illness and chronic disease is continuously increasing (OECD/European Observatory on Health Systems and Policies, 2017a).

If we look at the most frequently occurring chronic diseases in Hungary, it is obvious that cardiovascular diseases still remain the leading position among both men and women. OECD/European Observatory on Health Systems and Policies (2017b) states that in 2014, cardiovascular diseases accounted for the deaths of 35 000 women (55% of all deaths) and over 27 000 men (45% of all deaths). The second leading cause is cancer – almost 15 000 women and 18 000 men died from cancer in 2014 (23% and 29% of all deaths, respectively).

The questions are: what can we do in order to reduce the risks and/or avoid the above-mentioned chronic diseases as leading causes of mortality; and how can we measure the health status related to smart lifestyle of a certain population? In order to find the answer, the following risk factors should be analysed and summarized.

### ***3.1 Environmental Issues (Environment-related Risk Factors)***

According to Dannenberg, Frumkin and Jackson (2011) relationships between public health, health awareness and sustainability is determined in the definition of environmental health. Environmental health as the subcategory of public health, focuses on the relationships between people and their environments. There are many goals of environmental health, but the most important objectives are to control environmental threats and hazards and also to promote healthy environments. Traditional environmental health focused on sanitation issues, such as clean water, sewage, waste management, food safety and rodent control. In recent decades, environmental health has expanded its scope to address chemical and radiological hazards, such as pesticides and air pollution. And most recently, environmental health has addressed cross-cutting issues, including the built environment, climate change and sustainability (Dannenberg, Frumkin and Jackson, 2011). Population exposure to air pollution is also a critical non-medical determinant of health. Due to the urbanization the amount of built areas are constantly increasing, CO<sub>2</sub> emission is also continuously growing, however, forests and other green areas as the absorbing basis are decreasing. This can cause different problems in water quality, air quality or air pollution. Air pollution is a major environment-related health threat, it can cause respiratory diseases (e.g. asthma or COPD), lung cancer, and cardiovascular diseases. It has also been linked to low birth-weight, dementia, and damage to DNA and the immune system (WHO, 2017). The WHO estimates that indoor and outdoor air pollution cause approximately 7 million premature deaths per year (WHO, 2014a).

### ***3.2 Risk Factors Related to Nutrition***

If we focus on healthy lifestyle, it is also essential to understand the most relevant trends in food consumer patterns nowadays. Based on the studies written by Lutzenberger and Gottwald (1999), Vossen and Reinhardt (2002), Rützler (2005) Horváth et al. summarized the following consumer trends what can play a decisive role in the food market and consumption patterns: health food, anti-fat food, ethic food, naturfood, whole food, mood food, hand held food, fast casual food, sensual food, slow food and D.O.C. food (Horváth et al. 2005).

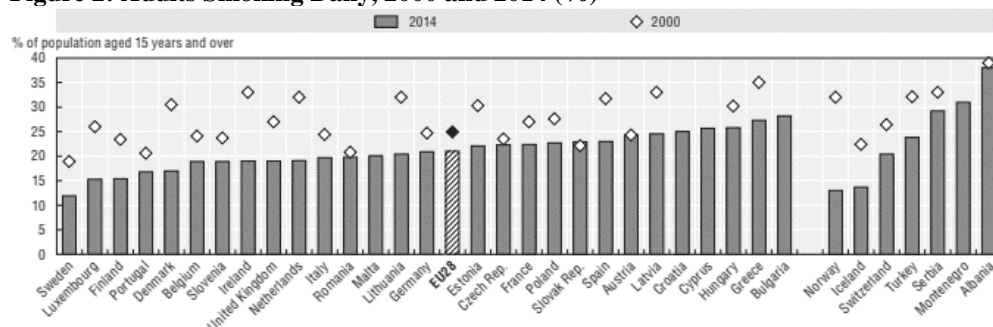
The change of food consumption structure and patterns are also related to the other dimensions such as consumption of fruits and vegetables or water and land demand. The increase of fruit and vegetable consumption, for example, would require more technological developments in several areas. As nutrition is an important determinant of health, inadequate consumption of fruit and vegetables is one factor that can play a role in increased morbidity (OECD, 2016). According to WHO, a healthy diet can help to protect against malnutrition in all its forms, as well as noncommunicable diseases, including diabetes, heart disease, stroke and cancer. Based on the recommendations of WHO for adults a healthy diet contains at least 400 g (5 portions) of fruits and vegetables per day; less than 10% of total energy intake from free sugars (for a

person of healthy body weight consuming approximately 2000 calories per day); less than 30% of total energy intake from fats and less than 5 g of salt per day (WHO, 2015). Formerly, the goal was to satisfy the food demand quantitatively. However, later, in developed countries, quality has primarily become the focus in higher income groups. Moreover, the demographic structure has also changed already. Nowadays, due to the industrialization and social well-being, people eat more unnecessary calories and industrially processed food, while the consumption of fruits and vegetables are less. Worldwide, low fruit diets caused of nearly 3 million deaths in 2015, while low vegetable consumption caused nearly 2 million deaths, and low physical activity caused 1.6 million deaths (OECD, 2017). On average across EU member states, 57% of adults reported eating fruit daily. Women are eating fruit and vegetables more often than men in all. Data varied from less than 40% in Bulgaria, Latvia and Romania, to more than 70% in Italy and Portugal. In Hungary, almost 60% of total adult population consume fruits in a daily level, which is higher than the EU average (Figure 3). Daily vegetable consumption ranged from less than 30% in Romania, to nearly 80% in Belgium. The average across the 28 EU countries was 51%, while in Hungary it was more than 46% (Eurostat database, 2017).

### 3.3 Risk Factors Related to Lifestyle

Healthy lifestyle choices such as exercising regularly, managing weight, and not smoking may substantially reduce the most frequently occurring chronic diseases (Chiuvet et al. 2006). Physical inactivity, and low fruit/vegetable consumption are among the 10 leading risk factors (Forouzanfar et al., 2016). With technology developments the physical activity of population is decreasing, as jobs have shifted to less physical activity and have required more intellectual work. However, the level of stress is continuously increasing which can increase the risks of certain chronic diseases such as depression or cardiovascular diseases. Smoking, alcohol consumption and obesity are three major risk factors for noncommunicable diseases. Health experts of the WHO estimate that tobacco smoking is responsible for 7 million people's death per year, yet, on average 18.5% of adults still report daily smoking across the OECD. Alcohol consumption among adults is slowly decreasing, however it is also a considerable risk factor as it increases the risk for diverse chronic diseases – such as cancer stroke, liver disease etc. – and causes an estimated 2.3 million deaths each year. Alcohol was the third major risk factor after tobacco and high blood pressure in Europe in 2012 and accounted for an estimated 7.6% of all men's deaths and 4% of all women's deaths, though there is evidence that women may be more vulnerable to some alcohol-related health conditions compared to men (WHO, 2014b). Also obesity is a serious health burden associated to increased risk for several chronic diseases (e.g. diabetes, cancer, cardiovascular diseases) – 54% of the total population of OECD countries is overweight and 19% of people are obese.

**Figure 2: Adults Smoking Daily, 2000 and 2014 (%)**



Source: Adapted from OECD/EU (2016) (data refer to 2000 and 2014)

Figure 2 shows the differences in smoking between 2000 and 2014. It is clearly seen that the number of smokers decreased in the vast majority of observed countries. Hungarians are among the heaviest smokers in Europe – 26% of Hungarian adults are daily smokers, down from 30% in 2000, but still the third highest rate among all EU countries (OECD/EU, 2016).

Life expectancy at birth in Hungary increased by almost 4 years between 2000 and 2015, to 75.7 years, but still remains nearly 5 years below the EU average of 80.9 years (increased by more than 6 years since 1990). Large gaps exist between men and women, with men living on average nearly 7 years less than women. The gap in life expectancy by socioeconomic status is even larger: Hungarian men with the lowest level of education live on average about 9 years less than men with the highest level of education.

It is not surprising that amount of regular physical activity is generally more in higher income group. The part of the population with lower incomes is usually less likely to get the recommended level of physical activity (150 minutes per week) in the vast majority of Member States. The greatest differences between the two observed groups were in United Kingdom, Slovenia and Luxembourg. However, in case of some Member States – such as Ireland, Sweden and Denmark – there is no significant difference between the diverse income groups. Hungary has a better position in lower income group than the average of the European Union, however the regular physical activity is less common among Hungarians with higher income than the average. This type of leisure activity means a modern lifestyle which can be caused not only by the lifestyle change, but also the constraint because of the lack of physical activity (especially during work). If physical activity is missing from the daily life of people because of the above-mentioned reasons it must be replaced by “artificial” activity. Thus, a new industry was evolved.

If we talk about health conscious lifestyle it is necessary to mention that there is a relatively new consumer group devoted to sustainable consumption: the so-called LOHAS segment (Lifestyle of Health and Sustainability). According to the study written by Szakály et al. (2015) an important feature of the segment is that they consider all the three above-mentioned pillars of sustainable development in their decision making processes. They are health-conscious and their devotion to sustainability is reflected in purchasing environmental-friendly, socially responsible products (Szakály et al. 2015).

#### **4. Conclusion and Recommendations**

This current paper primarily focused on the relationships among health, health awareness and healthy lifestyle in terms of sustainability. The most relevant health issues are connected to all pillars of sustainability – they have different economic, environmental and social effects. The key pillars of health promotion can be found primarily in our lifestyle, therefore, we can influence and improve our health condition primarily with changes in our lifestyle. Also literature and statistical data supported the importance of healthy lifestyle as a crucial factor of social sustainability. Nevertheless, changes of lifestyle have several impacts to the other dimensions (environmental and economic) of a country’s operation. For example, more fruit and vegetable consumption requires us to produce more products which would lead to the needs of more water, more soil and land which is not possible without significant environmental effects and these effects react to the health condition again (as a loop). Similarly, long term lifestyle changes would require more technological developments and also several sub-political interventions would be essential in the economy in the future.

As a limitation the above-mentioned interactions were not examined during this study, therefore further research will be required in this area. The main findings of the study demonstrated that the different health conditions of Hungarians slightly improved in last few

years, however, further developments are recommended since Hungary is a medium or high risk country among the Member States of the European Union. Moreover, the relationships and interactions among the increase of health awareness, income trends, public policies and other channels of knowledge transfer are also recommended to analyse in the future.

## References

- [1] Barcan, C. (2016). *How to Identify Your Brand's Sustainable Pathway*. [online] [cit.2018-03-05]. Available at: <http://www.vinyinfo.org/news/how-identify-your-brand%E2%80%99s-sustainable-pathway>
- [2] Crittenden, V.L., Crittenden, W.F., Ferrell, L.K., Ferrell, O.C., and Pinney C.C. (2011). Market-Oriented Sustainability: A Conceptual Framework and Propositions. *Journal of the Academy of Marketing Science*. vol. 39. iss. August, pp. 71-85.
- [3] Chan, M. (2016). *Health in the Sustainable Development Goals*. [online] [cit.2018-03-05]. Available at: <http://www.who.int/mediacentre/commentaries/2016/health-sustainable-goals/en/>
- [4] Chiuve, S. E., McCullough, M. L., Sacks, F. M., and Rimm, E. B. (2006). Healthy lifestyle factors in the primary prevention of coronary heart disease among men: benefits among users and nonusers of lipid-lowering and antihypertensive medications. *Circulation*. vol. 114 iss. 2. pp. 160-167.
- [5] Dannenberg, A.L., Frumkin, H. and Jackson, R.J. (2011). *Making healthy places: designing and building for health, well-being, and sustainability*. Washington D.C.: Island Press
- [6] Daly, H. E. (1996). *Beyond Growth: The Economics of Sustainable Development*. Boston: Beacon Press.
- [7] Deguen, S. and D. Zmirou-Navier (2010). Social inequalities resulting from health risks related to ambient air quality – a European review. *European Journal of Public Health*. vol. 20. iss. 1. pp. 27–35.
- [8] Eurostat database [online]
- [9] European Commission (2013). *Reflection Process on Chronic Diseases – Final Report*, [online] [cit. 2015-10-10]. Available at: [http://www.eular.org/myUploadData/files/EU\\_contribution\\_reflection\\_process\\_Chronic\\_Diseases\\_final\\_report.pdf](http://www.eular.org/myUploadData/files/EU_contribution_reflection_process_Chronic_Diseases_final_report.pdf)
- [10] Fuchs, V. (2004). Reflections on the Socio-economic Correlates of Health. *Journal of Health Economics*. vol. 23, pp. 653-661.
- [11] Forouzanfar, M.H. et al. (2016). Global, Regional, and National Comparative Risk Assessment of 79 Behavioural, Environmental and Occupational, and Metabolic Risks or Clusters of Risks, 1990–2015: A Systematic Analysis for the Global Burden of Disease Study 2015. *The lancet*, vol. 388, pp. 1659-1724.
- [12] Gibson, M. et al. (2011). Housing and Health Inequalities: A Synthesis of Systematic Reviews of Interventions Aimed at Different Pathways linking Housing and Health. *Health and Place*. vol. 17, pp. 175-184.
- [13] Horváth, Á., Kovács, A., Fodor, M. (2005). New consumer behavior characteristics in the food market. Trends in health and time awareness (in Hungarian). in Józsa, L.,

- Varsányi, J. (eds.): *Marketingoktatás és kutatás a változó Európai Unióban*. Széchenyi István Egyetem: Győr. pp. 108–119.
- [14] Keszi Szeremlei, A., Magda, R. (2015). Sustainable production and consumption, *VISEGRAD JOURNAL ON BIOECONOMY AND SUSTAINABLE DEVELOPMENT*. vol. 42. pp. 57-61.
- [15] Lutzenberger, J. and Gottwald, F. T. (1999): Ernährung in der Wissensgesellschaft. Frankfurt am Main.
- [16] Mackenbach, J.P. et al. (2008). Socioeconomic Inequalities in Health in 22 European Countries. *New England Journal of Medicine*. vol. 358. pp. 2468–2483.
- [17] OECD (2017). *Health at a Glance 2017: OECD Indicators*. OECD Publishing: Paris
- [18] OECD/EU (2016). Health at a Glance: Europe 2016 – State of Health in the EU cycle. OECD Publishing: Paris
- [19] OECD/European Observatory on Health Systems and Policies (2017a). *State of Health in the EU - Companion Report 2017*. OECD Publishing: Paris/European Observatory on Health Systems and Policies: Brussels.
- [20] OECD/European Observatory on Health Systems and Policies (2017b). *State of Health in the EU - Hungary – Country Health Profile 2017*. OECD Publishing: Paris/European Observatory on Health Systems and Policies: Brussels.
- [21] Rützler, H. (2005): Megatrends der Esskultur. Biofach, Nürnberg.
- [22] Szakály, Z., Pető, K., Popp, J., Jasák, H. (2015). The characteristics of the LOHAS segment, the consumer group which is devoted to sustainable consumption. *The Hungarian Journal Of Nutrition Marketing*. vol. 2. iss. 1. pp. 3- 9.
- [23] Vossen, K. and Reinhardt, F. A. (2002): Zukunftsmärkte. Düsseldorf.
- [24] WCED (1987). Report of the World Commission on Environment and Development: Our Common Future, p. 43.
- [25] WHO (2001). *The First Action Plan for Food and Nutrition Policy WHO European Region, 2000–2005*. WHO: Geneva.
- [26] WHO (2006). *Basic Documents, Forty-fifth edition, Supplement, Contribution of the World Health Organization*. [online] [cit.2016-05-05]. Available at: [http://www.who.int/governance/eb/who\\_constitution\\_en.pdf](http://www.who.int/governance/eb/who_constitution_en.pdf)
- [27] WHO (2013), 10 facts on noncommunicable diseases, [online] [cit.2016-05-05]. Available at: [http://www.who.int/features/factfiles/noncommunicable\\_diseases/en/](http://www.who.int/features/factfiles/noncommunicable_diseases/en/)
- [28] WHO (2014a). *7 Million Premature Deaths Annually linked to Air Pollution*. WHO: Geneva.
- [29] WHO (2014b). *Global Status Report on Alcohol and Health 2014*. WHO: Geneva.
- [30] WHO (2015). *Healthy diet*. [online] [cit.2018-03-05]. Available at: <http://www.who.int/mediacentre/factsheets/fs394/en/>
- [31] WHO (2016). *Health Impact Assessment*. [online] [cit.2016-05-05]. Available at: <http://www.who.int/hia/evidence/doh/en/>
- [32] WHO (2017). *Healthier, Fairer, Safer: The Global Health Journey*. WHO: Geneva.

## Significance of ECMT+ Participants' Feedback for their Future Entrepreneurial Careers within the EU

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### **Abstract**

*One of the consequences of globalization is the pressure on universities to internationalize and support student mobility for further European cohesion and competitiveness, therefore resources used in teaching should be multidisciplinary, critical, and obviously innovative to help students as future entrepreneurs to be able to cope with market demands on their knowledge, skills, and attitudes from the international perspective. The article introduces a unique Erasmus+ programme developed by the consortium of 7 European universities titled Entrepreneurship and Communication in Multicultural Teams (2016-2019) with the aim to teach students communicate effectively within multicultural teams during a ten-day course while solving and creating case studies being guided by a team of experts from partner institutions and companies. Except for obtaining theoretical and practical issues, students learn about themselves using a reflective method of a self-reflective journal and essay. The goal of the article is to present the outcomes of the comparison of two groups of students to identify students' opinions to be able to implement the results into further activities within the International Programme and it could help teachers to enhance the curricula at universities.*

**Keywords:** communication, Erasmus+, European integration, globalization, international business project

**JEL Classification:** A12, A23, F16, F66, I20

### **1. Introduction**

Nowadays, the process of economic globalisation increases, therefore global issues and important decisions in business, politics, education, health, and culture tend to affect citizens across borders. New attitudes and skills are required to work in global teams and deal with business partners or customers across cultures (Bobakova, Chylkova, 2014). The question of setting up an international business and effective communication between people of different nations is essential to ensure that all parties emerge with the same understanding. Without the right approach, cultural differences can greatly affect governments, businesses, organisations and individuals (Heinz, 2014).

One of the consequences of globalization is the pressure on universities to internationalize and support student mobility for further European cohesion and competitiveness, therefore resources used in teaching should be multidisciplinary, critical, and obviously innovative. Nowadays, tertiary education students are challenged only when teachers create learning experience that supports critical thinking and assembling parts of different knowledge for



students to be able to draw conclusions in the rapidly changing circumstances, which leads to knowledge dispersion and intensification (Dale and Robertson, 2009).

The program Erasmus+ Intensive Course offers to university students effective communication within multicultural teams within the designed ten-day course that significantly contributes to the development of intercultural and communicative competence while solving and creating case studies in multidisciplinary and multicultural groups, being supported by a team of experts from partner institutions and companies. During the course programme, students are given a balance of experience and theoretical issues, have an opportunity to introduce the various actors of the programme and set clear guidelines for multicultural team working (methodology used, self-assessment tools, expectations and learning outcomes).

Multicultural teamwork skills present a significant demand in the modern globalized world, therefore it is important to understand the different mindset of team members coming from different countries. The best way to learn the mentioned skills is learning by doing as authentic learning experiences provide good learning results within an authentic context where realistic tasks and performances are used in the multicultural setting (Saarikoski, et al., 2015). In the process of business education it is also crucial to follow pedagogical methods supporting the development of intercultural competence (Zelenková, 2010).

The programme Erasmus IP (International Project) involved intensive two weeks of working together both of students and teachers from six different institutions and different disciplines in order to reflect and develop their communication skills while working in multicultural workgroups. At the same time, they received input from teachers and practitioners from various backgrounds, who encouraged them to adopt a wide range of approaches. The project was aimed at providing a hands-on experience over a ten-day period to enable all the participants to develop and reflect on the necessary skills and strategies to achieve effective intercultural communication, using case studies and games (Robinson, 2011).

The project also emphasized the development of business education in terms of using innovative teaching methods as critical incidents, case studies, and games, and devoted a lot of attention to intercultural communication issues in managerial education. It confirmed the necessity to integrate intercultural communication in the university curricula to develop their cross-cultural communication and international business communication skills (Heinz, Orszulik 2014).

Intercultural skills development within the IP seems to be a definite benefit as it gives a chance for the students to widen their own views by sharing and discussing their ideas with their teammates. Nowadays intercultural competencies are sought after by many researchers and employers as they enable to understand critically or analytically one's own and other cultures' perspectives (Dervin et al., 2012).

Having finalized the mentioned IP, former 4 partner universities and 3 new partners continued working on developing a similar course, but at the same time focused more on the establishment of businesses in multicultural teams and in accordance with the new market demands, progressing diversity in European societies, and advanced information technologies. Intensive partners' negotiating related to the methodological approach, contents, and forms, responsibilities, submitting the project, and finally agreeing on the programme of the course took more than one year. The result of the common effort came in 2016 when the project was accepted and after a partner meeting in Paisley, Scotland, in autumn 2016, each partner university began working on the work package they were responsible for.

Currently, the project submitted, accepted and financed within the programme Erasmus+ Strategic Partnership involves Karelia University of Applied Sciences, Joensuu (Finland), Université Jean Monnet de Saint-Etienne (France) Technische Hochschule, Wildau (Germany), University of the West of Scotland, Paisley (Scotland), VIVES University College, Kortrijk (Belgium), and Politechnika Poznanska, Poznań (Poland). The project develops cooperation focusing on Intensive Programmes, preparation, and implementation of common courses related to start-ups, sharing curricula, workshops for teachers, and creating a common communication platform for all the participants of the project. The main goal of the project is the promotion of business education realized during common English workshops for students developing knowledge and skills in the area of management, marketing, communication, communication, etc. The Intensive Programme itself enables recruitment of 6 students from each partner universities every year who will work in multicultural teams on their real start-ups under the supervision of international tutors and entrepreneurs. The project also involves a broader community of students and teachers who will be able to use the course related output, which will definitely contribute to interconnecting of the theoretical and practical level of business education.

## **2. Method of Research**

In the last decade, using reflective learning practices as part of reflective learning methodology has become a very effective way of students' reflection on their learning experiences and making them engaged in the learning process. Reflective techniques help teachers to recognize patterns of thought and behaviour that shape students' thinking and actions, but especially shows how students perceive what they are learning and how they connect the new knowledge to the old one and what their attitude to that they are learning is (Zelenková, 2016).

One of the reflective methods is a learning journal, also called a diary or a self-reflective journal. Self-reflective learning diaries enable tutors to find out students' attitudes, feelings, and also their views related to the progress they made in the area of intercultural communication, developing their specialist, and language skills. Students can express themselves without fear and embarrassment, and improve their language skills. Moreover, writing a diary contributes to students' becoming more autonomous, taking control of their own learning, and in this way becoming more self-motivated.

Learning journals can involve reflective writing, dialogue, and role play writing. Reflective writing is related to writing about what and why they succeeded or failed at certain tasks, and about their impressions related to their learning currently. As it seems to be fairly difficult to make students write something insightful, it is recommended to list a set of questions helping students to be more specific, like for example questions about the focus of the lesson, grammar and vocabulary input, difficult issues, and any new information or skill students acquired.

Other reflective methods involve a self-reflective essay which is a brief paper where students describe an experience and how it has changed them or helped them to grow. Self-reflective essays often require students to reflect on their academic growth from specific projects or assignments, though others might require thinking about the impact of a specific event in your life. By describing the overall experience for readers, discussing current strengths and weaknesses as they relate to the experience they wrote about and sharing future plans for using this new information, it is possible to paint a vivid picture of how learners have grown and changed.

Self-reflective essays may challenge students to think critically about what they are doing well and what needs to be changed as a result of the described experience. Learners can begin by

talking about skills, responses, and actions that have been strengthened by this experience, then move into a discussion of areas that need working on.

By the conclusion, readers should have a clear, specific idea of how the experience affected learners and particular ways they have made progress. In a reflective essay, it is recommended to approach the conclusion by talking about how students plan to use what they learned from this experience in the future, in future classes, jobs, relationships and other aspects of life (Evans, 2009).

### **3. Results**

The presented research is related to the analysis of students' reflective learning journals and essays created during the IP course held in Joensuu, Finland in March 2017. The target group involves 2 teams of participants – the Belgian and the Polish ones. Conducting the analysis, it was necessary to set criteria for evaluating students' learning. They are connected to the following areas: 1 Pre-course activities–expectation and estimation of the course content, 2 Acquired knowledge about yourself, 3 Relationship with others, 4 Personal development, 5 Innovative pedagogical methods, 6 Culture issues, 7 Impact on the future life, 8 Language proficiency, 9 Especially appreciated issues, 10 Overall evaluation.

#### ***3.1 Belgian Students' Feedback***

The Belgian team involved 6 students of VIVES, University College, Kortrijk in Belgium.

1 None of the Belgian students has mentioned any pre-course activities, therefore they were not able to provide any information about their expectations related to the Erasmus+ IP course.

2 The students' knowledge about their progress during the course refers to the fact that they were the most experienced part of multicultural teams and brought the project to a successful end. However, they realize that they learned more about themselves during the interaction and are more opened to socializing, discovering other people's personalities, and widening the network of international contacts. A Belgian student declares that participating in the IP course taught students to be able to talk in front of everybody, to manage the stress, and when necessary to overtake the role of the leader.

3 The IP course is perceived as a good opportunity of the networking programme as it brought contacts for life and it was also possible to get in touch with different ways of working, which is very valuable for working in multicultural teams in the future.

4 The students appreciated the acquired skills like leading the team, using knowledge, working on negative issues, and especially listening to people, and working together. Solving problems, and particularly getting tools needed in future careers seem to be highly appreciated. One of the students has stated that participants of the IP course needed self-confidence related to starting their own businesses and can look for suitable internships. Belgian students have come to the conclusion that patience is one of the most appreciated features required while working in a team where its members come from different culture background.

5 In terms of new teaching methods, the students have declared that the teaching methods are similar to those used in their home country, but they highly appreciated the workshop on creativity when they were taught how to come with an idea to make the product useful and functional. They have also learned a lot from the workshop on visualizing business ideas leading to a better understanding of a product or a service and found useful the sessions aimed at introducing national teams.

6 The Belgian students have stated that they could not notice any big differences related to cultures as the majority of participants came from Europe where thanks to the Bologna Process education systems work in a similar way. However, they have noticed differences in legislative systems in the issues related especially to tax and payment policies, copyright laws, etc., the knowledge of which is useful when expanding to foreign markets. The students have reported that nationalities like the Germans, the Scottish and the Belgians tended to overtake leadership in multicultural teams.

7 The students have listed that in the future they will definitely use the broad knowledge about start-ups, expertise and delegating tasks to the right people. The ECMT certificate is a proof of what university graduates bring to the market including the knowledge about which sectors are profitable and promising, and about the behaviour of the current business generation. The Belgians have appreciated the skills needed for their professional life as pitching, drafting a business plan, and presenting the results.

8 Language and culture barriers were not important for Belgian students. They have just learnt several new words like pitching, a pitch competition, and generally the concept of the word *pitch*. However, the students have stated that after the IP course they are more fluent in English and they are not afraid of speaking English in public.

9 Belgian students have also mentioned non-appreciated issues connected mainly with a big number of lectures in the morning during the first week of the IP, which, for exhausted students, resulted in having a shortage of time for working in multicultural teams. Moreover, the testimonies delivered by Finnish businessmen seemed to be similar to each other and in students opinions they should have focused only on specific problems. It would have been better if students had been working in smaller groups where they could have asked specific questions and have had a direct interaction with speakers.

10 The Belgians are grateful for working together, for an inspiring environment as well as for working and playing hard, but they feel they were overloaded having to work in groups mainly in the evening. They think that a workshop on visual aspects would be very useful. They definitely criticize working with two or three coaches during the IP course as each of them had a different vision of their output and there was not any continuity in coaching. There were also too many changes in the schedule, but on the other hand, changing plans enabled the participants of the course to be more flexible.

### **3.2 Polish Students' Feedback**

The Polish team involved 6 students – 4 females and 2 males - from the University of Technology in Poznań who study Safety Engineering or Engineering Management. They had had experience in the field of organizational, managerial, creative thinking, analytical, and social skills.

1 The Polish students did not mention any pre-course activities, therefore they were not able to provide any information about their expectations related to the Erasmus+ IP course.

2 The students' knowledge about their progress during the course refers to feeling ready to work in any team, being more open, and being aware of the facts which skills it is necessary to improve. They realize that there is not only a need for professional skills but also soft skills, especially having an emphatic approach. They also came to the conclusion that networking leads to a change in life related to learning about themselves as in relationships it is easier to understand one's strengths and weaknesses and an individual is able to understand what should

be changed. They were also surprised at the fact how big their teammates' knowledge was and felt a little backward in the beginning.

3 Relationship with other students did not seem to be easy in the beginning as the IP course was the first international experience for the students in terms of presenting their own ideas to the team. However, the students reported they were not involved in any conflicts and met interesting people with different culture background.

4 The students appreciated the acquired knowledge very much, especially developing a business plan, using a canvas model and market penetration. However, the most valuable facts are gaining self-confidence in contracts and seeing how international companies work to develop a project. Now, the students are aware of the fact that a team of people from various cultures has bigger chances to achieve a success if it is capable to have a complex view of new experience in a new situation.

5 In terms of new teaching methods, the students declared that education in other countries is more modern and practical than in Poland. They also experienced new management skills and innovative teaching methods used by teachers. They appreciated a close cooperation with teachers and admitted that pitch presentations forced teams to develop business ideas faster and more efficiently.

6 The Polish students stated that Czech culture seems to be the most similar to Polish culture, but it was interesting to learn new facts about other European countries and standards related to teamwork. The trip to the Finnish countryside was a source of information about Finnish culture and it helped to understand its unique character.

7 The students could see big differences between Polish entrepreneurial conditions and entrepreneurship in Poland. The meeting with Finnish businessmen showed a significantly different concept of doing business and a more positive perceiving a businessman than in Poland, which can help Polish students to be more open and acquire a professional background and the ability to use it in the future. They were also surprised at the fact that the Finnish businessmen invest in self-development. This new approach helped the students to change their attitudes and gave them self-confidence in starting up their own businesses.

8 It was reported that overcoming language and culture barriers was difficult but brought a different vision of doing business. The students acquired the knowledge of numerous new words and phrases, like for example a very popular collocation *entrepreneurial mindset*, especially in the field of business English, and had an opportunity to use them in common conversation. The biggest challenge seems to be related to understanding the Scottish accent.

9 One of the most appreciated IP issues is connected with the local businessmen and their testimonials about their achievements and failures as well. However, the students consider the most useful developing a business plan and working with the Business Canvas Model. They also highly appreciate learning how to prepare a few minutes pitches to encourage potential investors to invest in their future businesses.

10 The Polish students evaluate practical part of the IP course in a more positive way than lectures. The most beneficial issue seems to be a discussion with motivated people, well prepared consulting and the chance to work with international students. However, the students criticize schedule changes, or even a mess and a lot of cancelled lectures, in the second week of the course. They also expressed the opinion that the communication platform is not user-friendly and should definitely be improved in the future.

### ***3.3 Comparison of Belgian and Polish Students' Views expressed in Self-reflective Diaries and Essays***

Comparison of opinions expressed by Belgian and Polish teams show that team members had different expectations related to the output of the IP course as they come from different culture, educational, and entrepreneurial background.

Both Belgian and Polish teams did not provide any information about the pre-IP activities, which means they were either not developed at all or were not paid proper attention.

The Polish students were surprised at the big knowledge of their teammates from other countries and felt a little backward in the initial stage of the IP course. On the contrary, the Belgians proved to be self-confident expressing an opinion that they were the most experienced members of multicultural teams.

Most Polish and Belgian team members evaluated their personal progress related to the ability to become part of the process of company establishment as well as the acquisition of specific professional and social skills. Both teams appreciate the possibility of networking, but relationship building was not easy for Polish students as the IP was the first international experience for them to present their ideas in multicultural teams.

Innovation related to teaching methods was highly appreciated by Polish students who have declared that education in other countries is more modern and practical than in Poland, but the Belgians seem to be involved in innovative teaching on a daily basis. However, they have learned a lot from the workshops on creativity and visualizing business ideas and they have become more self-confident in speaking English in public.

Polish students could see big differences between entrepreneurial conditions in Poland and Finland as the meeting with Finnish entrepreneurs showed a different concept of doing business, which helped Polish students to change their attitudes and provided them with self-confidence in starting up their own businesses. The Belgians were grateful for the skills needed for their professional life as pitching, drafting a business plan, and presenting the results.

For Polish students, it was difficult to overcome the language and culture barriers and they learned a lot of new words and collocations while language and culture barriers were not important for the Belgians, but a great benefit is that they are not afraid of using English in various situations.

Polish students consider meeting Finnish entrepreneurs, professional debating about business models, and getting a valuable feedback from tutors to be the most valuable issues of the IP, but for some Belgian students businessmen's testimonies were similar to each other, and took too much time, which resulted in the lack of time for working in multicultural teams. Both teams criticized frequent schedule changes and agreed on the fact that the communication platform was not user-friendly. They would also prefer having one coach during the whole IP course.

There are significant differences in command of English between the Polish and the Belgians, which can also be observed in the level of the written language used in self-reflective essays and diaries, with the Belgians being advanced in the written language.

To summarize the comparison of Polish and Belgian opinions, it can be stated that a certain degree the difference between Polish and Belgian students' views is related to a different social, economic and entrepreneurial background in Poland and Belgium, which is definitely connected with different historical development, related especially to the entrepreneurial

mindset and the length of its existence as well as to the degree of innovation occurring in the Polish and Belgian systems of education.

#### 4. Conclusion

After the analysis of Belgian and Polish students' self-reflective essays and diaries, it can be stated that the Polish have made a bigger progress in numerous aspects of business education as their starting point was different from the Belgian one. The Belgian students seem to be accustomed to more innovative teaching methods and they also have an opportunity to work in international groups of students. Polish students could see big differences between entrepreneurial conditions in Poland and Finland, therefore they learnt more and their attitudes have changed after the IP.

The recommendations for all the staff involved in the preparation and running the IP in the following year involve improving the communication platform, better organizing of pre-course activities, changing the system of coaching in multicultural teams as well as providing more time for working in teams.

In conclusion, most Polish and Belgian team members evaluated their personal progress related to the ability to become part of the process of company establishment as well as the acquisition of specific professional and social skills. Both teams appreciate the possibility of networking, relationship building, and acquiring more confidence in speaking English in public.

It is necessary to state that the acquired data is significant for business educators designing university curricula, which are expected to meet undergraduates' expectations when they enter the labour market. The information collected in the self-reflective essays and diaries has proved that there is a gap between students' expectations, especially in the case of the Polish students, who indicate a need of a stronger connection between theory and practice.

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#### *References*

- [1] Bobakova, H. and Chylkova M. (2014). To Some Disparities between National and Global Education in the European Context. In *2nd International Conference on European Integration 2014*. Ostrava, Czech Republic, pp. 36 – 42.
- [2] Dale, R. and Robertson, S. (2009). *Globalization and Europeanization in Education*. London: Symposium Books.
- [3] Dervin, F., Paatela-Nieminen, M., Kuoppala, K. and Riitaoja, A.-L. (2012). Multicultural Education in Finland: Renewed Intercultural Competencies to the Rescue? *International Journal of Multicultural Education*, vol. 14, iss. 3, pp. 1-13.
- [4] Evans, D. (2009). The End Product. *Modern English Teacher*, vol. 18, iss. 3, pp. 37-39.

- [5] Heinz, K. (2014). Assessing Students' Progress in Intercultural Communication Based on Self-Reflective Learning Diaries. In *14th International Multidisciplinary Scientific GeoConference & EXPO SGEM 2014*. Albena: SGEM, pp. 643-650.
- [6] Heinz, K. and Orszulik I. (2014). Innovative approach to teaching business-developing case study methodology. In *Efficiency and Responsibility in Education 2014*. Prague: Czech University of Life Sciences Prague, pp. 521-526.
- [7] Robinson, T. (2011). Rock and Roll English Teaching: Content-Based Cultural Workshops. *English Teaching Forum*, vol. 49, iss. 4, pp. 14-23.
- [8] Saarikoski, L. et al. (2015). Intercultural, Reciprocal and Multidisciplinary Learning Case Study. [online]. [cit.2018-01-12]. Available at: <http://sefi.be/page/12/?conference=2015-orleans>.
- [9] Zelenková, A. (2016). Using Student Learning Journals to Develop Intercultural Competence. In *Cudzí jazyky a kultúry v teórii a praxi*. Banská Bystrica: Univerzita M. Bela v Banskej Bystrici, pp. 351-362.
- [10] Zelenková, A. (2010). *Interkultúrne vzdelávanie v cudzích jazykoch na vysokej škole. Metody a ich reflexia*. Banská Bystrica: Univerzita M. Bela v Banskej Bystrici.



## The Trans-Pacific Partnership: Positive and Negative Impacts

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### **Abstract**

*The aim of the article is the analysis of the Trans-Pacific Partnership (TPP) in relation to member countries of this partnership. The article introduces the terminological basis of the TPP in part two. In this part of the article is described the level of knowledge, recent theoretical approaches, and their application. The third part of the article is about positive and negative impacts of the TPP. In this key part of the article, the author describes results of research about positive and negative impacts of the TPP. In the fourth part of the article, the author evaluates and also explains opportunities and threats for member countries from the TPP agreement. In the end, it is not clear whether the impacts are positive or negative, based on the results of studies dealing with the impact of the TPP on world trade. Economic models do not provide unambiguous results and therefore cannot decide on accession or block accession to the TPP. It is clear that governments must also consider other important criteria for them. What is more, the agreement between the EU and Japan (EU-Japan Economic Partnership Agreement - EPA) gained prominence for Tokyo when the U.S. President Donald Trump decided to withdraw the U.S. from talks on the TPP.*

**Keywords:** *Trans-Pacific Partnership, positive and negative impacts, Free Trade Agreements, Preferential Trade Agreements, EU-Japan Economic Partnership Agreement, the U.S., Japan, China, ASEAN, and the EU.*

**JEL Classification:** *F49, F53, F63*

### **1. Introduction**

The Trans-Pacific Strategic Economic Partnership Agreement (TPSEP) is the original name of the TPP agreement. In the 2003, the TPP agreement was proposed as a tool for Singapore, New Zealand, and Chile to liberalize trade in the Asia-Pacific region. Brunei joined the agreement as the fourth member in 2005. Shortly afterwards, the United States, Australia, Peru, and Vietnam joined it likewise. (Fergusson et al., 2016, p. 86) As Vice President J. Biden pointed out in 2013: *Our goal is for high standards for the Trans-Pacific Partnership to enter the bloodstream of the global system and improve the rules and norms.* (Fergusson et al., 2016, p. 86) In 2009, the Obama administration announced that it would continue to negotiate the TPP [...] *with the goal of shaping a regional agreement that will have broad-based membership and the high standards worthy of a 21<sup>st</sup> -century trade agreement.* (Fergusson et al., 2016, p. 89) The TPP served several purposes. Firstly, the agreement was focused on to keep the region open to Washington and its leadership. (Dian, 2017, p. 584) In October 2015, the TPP negotiations were terminated.

However, [...] highlighting the risks of open multilateral trade borders became one of the main themes in the campaign of President Trump. (Helble, 2017, p. 406) *So, when Trump promised to withdraw U.S. from the TPP and take strong action against China, he tapped into the deep vein of resentment that was brewing in parts of American society* (Elms, Sriganesh, 2017, p. 253). The new administration of Donald Trump has made several crucial decisions from the start. These included the signing of the withdrawal of the United States from the TPP on January 23, 2017. However, the withdrawal of the United States from the agreement of the 12 Pacific states was not surprising after the victory of Donald Trump. Donald Trump has promised withdrawal from the TPP because of protecting American workers in his pre-election promise. (Donald J. Trump, 2016) In the presidential memorandum, we can read that [...] *the policy of my Administration to represent the American people and their financial well-being in all negotiations, particularly the American worker, and to create fair and economically beneficial trade deals that serve their interests.* (The Whitehouse, 2017) In addition, it is important to note that it may not be dead. The Secretary of State Rex Tillerson publicly broke with Trump by saying that he was not actually against the TPP. (Griffith et al., 2017, p. 574)

## **2. The Impacts of the TPP (Problem of Formulation and Methodology)**

We can find the roots of the current situation by examining the economic, political, and geostrategic aspects of the Transpacific Partnership (TPP). Research can also help to find positive and negative impacts of this agreement. The aim of the study is to analyze relations and relevant research which brings us the basic framework of the economic, geopolitical, and geostrategic aspects of the TPP. The research question has been set in the context of the research plan: Can the economic impacts be the criterion of acceptance or rejection of the TPP? The main research question can be further divided into a sub-questions: What is the main significance of the TPP for its members? What is the interrelationship between the TPP and the EPA? The applied research method is content analysis.

Wesley argues in his research that the TPP and the RCEP [The Regional Comprehensive Economic Partnership] are the means of a new phase of competitive regionalism in Asia. (Wesley, 2015, p. 481) Wesley argues that the TPP and the RCEP really represent the new phase of competitive regionalism in Asia. In his opinion, the complexity of this phase arises from two factors. First, rivalry is not done for size or leadership but for regional organization. Secondly, this time there are four major rival parties. According to Wesley, the main competitors of the competition are the United States, China, Japan, and ASEAN. (Wesley, 2015, p. 481-482) Furthermore, Capling and Ravenhill argue that it is important to determine the underlying differences according to the individual actors of the agreements. In Preferential Trade Agreements (PTAs) it is also possible to recognize some versatile competition models. (Capling, Ravenhill, 2011, p. 555) Capling and Ravenhill state that PTAs involving the U.S. are by far the most comprehensive (covering goods and trade in services, WTO plus commitments, labor and environmental standards) Australia and New Zealand appear to be a subset of the U.S. model PTAs fully cover products but less WTO plus commitments than the U.S. agreements. Japanese (South Korean) agreements are similar to those of the United States in their interest of a wide range but are characterized by their inclusion of technical assistance for capacity building with developing countries. Chinese and ASEAN countries agreements are typically much less ambitious, narrower in their coverage of trade in goods and services and, with some exceptions do not contain any WTO plus commitments. (Capling, Ravenhill, 2011, p. 555)

In addition, Lee claims in his research that China thanks to its economic development could lead a wide range of economic and strategic ties that were built in the new millennium. This network is a big challenge for new economic integration and the strategic alliance of the United States. (Lee, 2015, p. 345) Lee argues that the ultimate success of the TPP will depend on the proactive link between G2 [Big Two, China-USA]. Many countries are tied to economic and political institutions led by the U.S. and China in this area. What is more, [...] *it is also important to notice that China's entry to WTO was accompanied by liberalisation steps before and several years after China entered WTO.* (Končíková, Hloušek, 2014, p. 332-333) Moreover, seven countries in the TPP participating at the same time in the RCEP. In addition, all twelve the TPP member countries, including four, who wish to join the TPP (Indonesia, South Korea, Philippines, and Thailand) are members of the FTAAP [The Free Trade Area of the Asia-Pacific]. Furthermore, all of these countries are linked by bilateral or regional free trade agreements [FTAs]. (Lee, 2015, p. 345) Furthermore, Nedelka shows in his research that [...] *their world economic integration rate is different, but their trade relationships strongly intraregional, therefore when the import demand of the western countries decreased, the intraregional trade helped the recovering of their trade balance.* (Erzsébet Nedelka, 2012, p. 246).

### 3. The Positive and Negative Impacts

On October 5, 2015, the TPP was signed by representatives of twelve Asian-Pacific countries. The importance of this step is clear, especially for possible positive impacts of TPP on global trade directives. As President Obama reminded [...] *the TPP means that America will write the rules of the road in the 21st century [...] if America doesn't write those rules—then countries like China will.* (Allee, Lugg, 2016, p. 1) Among positive impacts of the TPP can be the introduction of a uniform standard of trade agreements within regions or international institutions. Allee and Lugg point out in their research that the TPP could become a new standard for future trade agreements and possibly the basis for future multilateral negotiations in the WTO as the first regional agreement. (Allee, Lugg 2016: 2) Allee and Lugg believe that the one [...] *whose model prevails in negotiations is determined largely by bargaining power. Thus notable initiatives like the TPP cannot be separated from power politics and their geopolitical context.* (Allee, Lugg, 2016, p. 8) The World Bank explains its positive attitude towards the TPP because [...] *deepening global and regional trade and investment integration through lower non-tariff barriers would further boost productivity and competitiveness.* (The World Bank, 2016, p. 106)

Petri and Plummer's research shows the following positive effects, the TPP will substantially benefit its members, and especially raise real incomes in the U.S. by \$131 billion in 2030. (Petri, Plummer, 2016, p. 17) Petri and Plummer determine the negative impacts as follows [...] *the TPP will also generate adjustment costs; some workers may face difficult transitions as less productive jobs are lost and more productive jobs are created.* (Petri, Plummer, 2016, p. 17) According to Petri and Plummer, geopolitical aspects are also at stake, and therefore the TPP will be a key point in the balancing strategy towards the Asia-Pacific region. The United States has close economic and political relations in this area, and therefore deeper economic ties and political stability are the U.S. central interests in the Asia-Pacific region. (Petri, Plummer, 2016, p. 18) What is more, the positive effects of Free Trade Agreements (FTAs) were also examined by Liu and Ornelas, who focused on the relationship between the country's participation in the FTAs and the sustainability of its democracy. Their research has brought these major results. Firstly, the deeper the commitment of the countries in the FTAs, the more the durability of democracies increases. Secondly, the

political instability of the country helps to promote participation in FTAs. (Liu, Ornelas, 2014, p. 34).

However, researchers point out that it is clear from their results that [...] *that participation in FTAs is, unsurprisingly, no panacea: they can help to consolidate democracies, but their reach is limited. Our estimates make this limit clear.* (Liu, Ornelas, 2014, p. 35).

Positive results from engaging in FTAs include a team-led research conducted by Mansfield, dealing with the links between political regimes according to the classification (democracy, autocracy) and their relationship to international trade. In their results, they say that [...] *aggregate trade barriers will be lower between democracies than between a democracy and an autocracy.* (Mansfield et al., 2000, p. 35) They further state that [...] *trade between democracies tends to be more extensive than commerce within mixed pairs [democracy and autocracy].* (Mansfield et al., 2000, p. 35) Their results show that the average of the pair, which consisted of democracy and autocracy accounts for roughly 15% to 20% less trade than the one made up of two democracies. These results are confirmed over time, for example, in the 1990s, the average trade between democracy and autocracy was roughly 40% smaller than that between democracies. (Mansfield et al., 2000, p. 35) These differences can be attributed to the Cold War period largely covered by Mansfield's research (1960-1990). Researchers offer an explanation based on the fact that [...] *it might be the case that democratic pairs trade more because they tend to be allies because they belong to the same commercial institutions (GATT and other PTAs), or because they are not involved in military conflicts.* (Mansfield et al., 2000, p. 35).

We can also include a mechanism for resolving disputes between the investor and the state (ISDS - investor-state dispute settlement) among the negative impacts. For example, Labonté states in his research that [...] *ISDS is one of the most controversial inclusions in FTAs. Most of the environmental disputes have important indirect health implications.* (Labonté et al., 2016, p. 3) There are several critical views on how ISDS works today, according to Labonté as follows: lawyers who make decisions have had links with multinational companies in the past, a small group of these elite lawyers will decide on the majority of cases, the increasing amount of rewards, there is no possibility to appeal. (Labonté et al., 2016: 3-4) The study led by Capaldo focuses on strictly economic effects and states that [...] *projections indicate increases of less than 2.5 percent by 2025 for nine of the eleven participating economies.* (Capaldo et al., 2016, p. 5) Another negative impact of the TPP may be the loss of jobs. Capaldo says the biggest loss will be suffered by the U.S. (approximately 450,000 jobs in 2025, followed by Canada (75,000) and Japan (58,000), while the smallest loss will suffer from New Zealand (approximately 5,000). In the TPP countries is estimated about 771 thousand loss of jobs. (Capaldo et al., 2016, p. 18) The simulation of Capaldo's team also states that the TTIP negotiations and the recent BRICS trade agreement proposals show that global competition for higher competitiveness may indeed exist. Risk with this quest for competitiveness is that all countries will cut costs, lose jobs, and attract even high levels of inequality so that total demand and supply will suffer. This can dangerously threaten the ability of countries to achieve sustainable growth. (Capaldo et al., 2016, p. 18) In conclusion, Capaldo sums up [...] *the TPP is projected to generate small gains in GDP in most participating economies. We also project job losses and higher inequality in all participating economies.* (Capaldo et al. 2016, p. 19) Conclusions of Capaldo also confirm the results of Lankner's and Milanovic's research, which was based on global income distribution over the period 1988-2008. Lakner and Milanovic, show that [...] *the level of global inequality remains high [...]* (Lakner, Milanovic, 2013, p. 48).

Furthermore, among other impacts, we can include the link between the wars and the trade that the team under Martin led. Their results show that the claim that trade promotes peace is only partially true: bilateral trade increases the price of bilateral war and really prevents this war. On the other hand, multilateral trade openness increases the likelihood of war between any pair of countries, because it shrinks the cost of waging war with any given country. (Martin et al., 2008, p. 29) Martin further argues that *...trade globalization also affects the nature of war: multilateral trade openness increases the probability of local wars and deters multilateral conflicts.*(Martin et al., 2008, p. 29-30) These results are supported by further research by Martin's team in 2008, in which they conclude that commercial openness affects the risk of civil war. Business openness increases the risk of low-level conflict but reduces the risk of high-intensity conflicts. (Martin et al., 2008b, p. 549) In 2010, Martin's team explored the relationship between conflict geographies and Free Trade (FTAs) agreements. Their results confirmed that *[...] economic and security gains are complementary to explain the evolving geography of trade agreements. Trade gains may be instrumentalized for a superior objective of peace but that makes them more, not less, important.* (Martin et al. 2010, p. 29-30).

In addition, Mayer and Thoenig also explored the relationship between trade agreements and war conflicts. The issue was explored on the example of the East African Commonwealth (EAC). Researchers conducted a simulation of how much the trade agreement would have affected the risk of conflict. Their results are that *[...] we see that [...] on average a common market would decrease conflict risk by 4%. We also point to an non-negligible increase in the potential risk of internal conflicts (+2% on average) [...]* (Mayer, Thoenig, 2016, p. 20).

#### **4. The TPP in relation to the EU-Japan Economic Partnership Agreement**

In 2017, the European Commission is reaping the fruits of the Global Europe strategy (2007) that is *[...] formalized the EU's policy of expanding trade relationships via FTAs.* (Söderberg, 2012, p. 261) The negotiations lasted for a long time because there was a traditional barrier to negotiating between the EU and Japan. Nelson argues that Japan tendency is business policy before political and social politics while the EU tends to put politics and social policy before business policy. (Nelson, 2012, p. 362) Furthermore, Nelson states that the EPA was in competition with the TPP. The EU has already concluded a trade agreement with Korea (the EU-Korea FTA, 2011) that has favored Korean products on the EU market. The Japanese Government was encouraged by the industry in the same agreement. (Nelson, 2012, p. 362) *The Korean FTA [with the EU] has been a watershed in terms of reaction from the Japanese... Industry has been galvanised and is now piling pressure on the Japanese government [...]* (Nelson, 2012, p. 363) In 2017, the EU has concluded negotiations on a trade agreement with Japan. The EU firms already export more than 58 billion euros per year to goods and 28 billion euros in services to Japan each year. The EU-Japan Economic Partnership Agreement (the EPA) will remove trade barriers, help shape global trade rules, and *[...] send a powerful signal that two of the world's biggest economies reject protectionism.* (The European Commission, 2017)

Suzuki argues in his research that if the EPA is closed and ratified before the TPP, this would be a historic breakthrough. This would mean a shift away from the Japanese "America First" approach, which prevailed during the post-war era. On the other hand, [...] the fact remains that the US is a larger trade partner than the EU for Japan. (Suzuki 2017: 885) What is more, Suzuki's research shows that [...] *the uncertainty caused by the Trump administration's abandonment of the TPP and by the UK's Brexit referendum of June 2016 have complicated Japan's trade policy, making it unpredictable than ever.* (Suzuki 2017, p. 886) In addition, as Suzuki confirms Japan is strongly declare its commitment to defining future global trade rules. (Suzuki, 2017, p. 886)

Frenkel and Walter also point to the political considerations of the agreement: the official name of the agreement does not contain the word "trade". The name "Economic Partnership agreement" is more likely to emphasize that cooperation goes beyond trade and should be considered as a strategic partnership, including cooperation on many levels. (Frenkel, Walter, 2017, p. 358) Berkovsky reminds that EU-Japan cooperation is in a positive development in international security issues. These countries work together in Afghanistan and the Somali coastal regions. (Berkovsky, 2012, p. 286) As Berkovsky shows [...] *the day-to-day cooperation between Japanese and European NGOs in Afghanistan is also noteworthy and provides evidence that Japanese and Europeans can successfully work together in international politics and security.* (Berkovsky, 2012, p. 286) In addition, Frenkel and Walter claim that the EPA [...] *it could become a vehicle to fill the vacuum created by the withdrawal of the United States from the Trans-Pacific Partnership (TPP).* (Frenkel, Walter, 2017, p. 358) However, Its completion is a remarkable success with regard to the current business agreement, economic size of the contractual relationship, and the scope of the agreement. (Frenkel, Walter, 2017, p. 358) Frenkel and Walter show in their research that the conclusion of the EPA had considerable economic and political reasons for both parties. *The economic gains that an agreement would be able to reap are considerable. Politically, the agreement is an opportunity for the EU to solidify its position in the Pacific Rim [...]* (Frenkel, Walter, 2017, p. 363) Researchers argue that the US withdrawal from the TPP has created an opportunity to strengthen the role that the EU plays in generating global trade standards. (Frenkel, Walter, 2017, p. 363) Hilpert reports about specific profits from the EPA that supports the current situation of the TPP and Brexit. In his view, the deal will have a positive impact on Europe by attracting Japanese investors. Japanese companies have so far been reluctant to invest in continental Europe compared to competitive locations such as Asia, the US, and the United Kingdom. (Hilpert, 2018, p. 6) Hilpert shows further that the agreement strengthens the relations of both countries in the current era of uncertainty. *While uncertainty has increased in the fields of trade and security policy during the Trump administration's first year in office, the chances and potential for closer EU-Japan cooperation are considerable.* (Hilpert, 2018, p. 8)

## 5. Conclusion

From the theoretical concept (Wesley, 2015), one can conclude that there are now four main competing forces in the Asia-Pacific region: the U.S., Japan, China, and ASEAN. These actors compete in the field of economic regionalism. If we continue with theoretical approaches, we can see that the reasons for joining different regional FTAs are both economic, geopolitical and strategic as some scholars say (Capling, Ravenhill, 2011). As some of the results (Lee, 2015) point out, this is mainly a power struggle between the U.S. and China, although there is a lot more players here. Some research (Lee, 2015) also shows that the Asia-Pacific countries are largely inter-linked by bilateral or regional FTAs to such an extent that they will have to

find a consensus in some important ways. Some research (Fergusson, 2016) confirm that if we focus directly on the process of negotiating the TPP, it is clear that most countries have negotiated the TPP in 2010-2014, with Americans, in particular, taking the TPP as a growing platform for regional economic integration.

Based on the results of some studies dealing with the impact of the TPP on world trade. It is not clear whether the impacts are positive or negative. Some researchers claim that the TPP will have a positive impact. In their research, Allee and Lugg (Allee, Lugg, 2016), point out that TPP will create a new single standard of trade agreements within regions or international institutions (WTO). In particular, the United States sees this idea as the basis for multilateral WTO negotiations. Furthermore, other positive effects are reported by Petri, Plummer (Petri, Plummer, 2016), who confirm the increase in real income (especially for the U.S.). The results of the Liu and Ornelas (Liu, Ornelas, 2014) research confirm that PTAs can consolidate democracies if the surrounding countries are stable democracies. What is more, other positive impacts include the Mansfield research, which states in its results that the democratic countries are more trading together because they tend to be allies because they belong to the same trade institutions (PTAs). Labonté describes as problematic in his research the investor-state dispute settlement mechanism (ISDS). For example, Capaldo (Capaldo, 2016) lists the following purely economic negative impacts: revenue cuts and small profits, job losses and acceleration of race to the bottom. Research by Capaldo (Capaldo, 2016) confirms the research by other experts (Lakner, Milanovic, 2013) who said that TPP could lead to further increases in global inequality. The relationship between war conflicts and trade agreements was explored by Martin and Mayer and Thoenig, both surveys confirming that regional FTAs can increase the risk of local conflicts while reducing the risk of more intensive conflicts.

As can be seen from the results of the researchers on the positive and negative impacts, the ambiguity of the results of studies based in particular on economic models leads to the conclusion that they cannot be the main decision-making aspect of the TPP. Now we come to the answer to the main research question (and the subquestions). As described above, economic models do not produce very clear results and therefore I believe that it is not possible to decide on the accession or block accession to the TPP solely on the basis of the economic impacts of the TPP, but the individual governments must also consider other important criteria for them. On the basis of the findings, I believe that the current proposal for the TPP has another major importance for each actor. For smaller countries, it is mainly economic, but key non-purely economic criteria may be more important for key players (USA, China, Japan, ASEAN). For the U.S., it is mainly about the "Pivot to Asia-Pacific" strategy with all aspects (geostrategic, geopolitical and economic). For Japan, it is important to limit the economic dominance of China in this region. Furthermore, I think it is important to mention that Japan has also now ended the negotiation on the EU-Japan Economic Partnership Agreement (EPA). This is sending a message to other countries about the importance of shaping globalization. (European Commission, 2017) For China, it was important to monitor the development of the TPP, build up its economic communities in the region, and after the current, the U.S. withdrawal, consider whether to aspire to join the TPP. And for ASEAN, the TPP can be a suitable alternative to the regional economic communities being led by China. The answer to the last question is that the interrelationship between the TPP and the EPA is such that these two contracts have competed together for the favor of Japan. Finally, the U.S. withdrew from the TPP and the EPA was concluded. In the era of current uncertainties, it is a historic signal to consolidate the Japanese and European roles in world trade.

## References

- [1] Allee, T., Lugg, A. (2016). Who wrote the rules for the Trans-Pacific Partnership? *Research & Politics*, vol. 3, iss. 3, pp. 1-9.
- [2] Berkofsky, A. 2012. EU-Japan relations from 2001 to today: achievements, failures and prospects. *In Japan Forum*. Vol. 24, No. 3, pp. 265-288.
- [3] Capaldo, J. and Izurieta A., and Sundaram J. K. (2016). Trading down: Unemployment, inequality and other risks of the Trans-Pacific Partnership agreement. *Working paper No 16-01*. Tufts University: Global development and environment institute.
- [4] Capling, A., Ravenhill, J. (2011). Multilateralising regionalism: what role for the Trans-Pacific Partnership Agreement? *The Pacific Review*, Vol. 24, No. 5, pp. 553-575.
- [5] Dian, M. (2017) The strategic value of the Trans-Pacific Partnership and the consequences of abandoning it for the US role in Asia. *International Politics*, Vol. 54, iss. 5, pp. 583-597.
- [6] Donald J. Trump (2016). *Donald J. Trump* [online]. [cit.2017-02-15]. Available at: [https://www.donaldjtrump.com/100/?utm\\_medium=web&utm\\_source=djt\\_web\\_top\\_bar](https://www.donaldjtrump.com/100/?utm_medium=web&utm_source=djt_web_top_bar).
- [7] Elms, D., Sriganesh, B. (2017) Trump's trade policy: Discerning between rhetoric and reality. *Asian Journal of WTO & International health law and policy*. Vol. 12, iss. 2, pp. 247-263.
- [8] European Commission (2017). *EU and Japan finalise Economic Partnership Agreement* [online]. [cit.2017-12-30]. Available at: <http://trade.ec.europa.eu/doclib/press/index.cfm?id=1767>.
- [9] Ferguson, I. and McMinimy, M. A., Williams, B. R. (2016). The Trans-Pacific Partnership (TPP) Negotiations and Issues for Congress. In Webb, J. (eds.). *Transatlantic and trans-pacific free trade agreements: Negotiation issues and congressional considerations*. Nova Science Publishers, pp. 85-160.
- [10] Frenkel, M., Walter, B. (2017). The EU-Japan Economic Partnership Agreement: Relevance, Content and Policy Implications. *Intereconomics*. Vol. 52, iss. 6, pp. 358-363.
- [11] Griffith, M. K. and Steinberg R. and Zysman J. (2017). From great politics to a strategic vacuum. Origins and consequences TPP and TTIP *Business and Politics*. vol. 19, iss. 4, pp. 573- 592.
- [12] Helble, M. (2017) Salvaging the Trans-Pacific Partnership: building blocks for regional and multilateral trade opening? *Asia Europe Journal*, vol. 15, iss. 4, pp. 399-416.
- [13] Hilpert, H. G. (2018). The Japan-EU Economic Partnership Agreement—economic potentials and policy perspectives. *Asia Europe Journal*.
- [14] Končíková, V. and Hloušek, M. (2014) Nature of Trade Growth between the People's Republic of China and the European Union. In *International Conference on European Integration 2014*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 327-334.



- [15] Labonté, R. and Schram, A. and Ruckert, A. (2016). The Trans-Pacific Partnership Agreement and health: few gains, some losses, many risks. *Globalization and health*, vol. 12. Iss. 1.
- [16] Lakner, Ch. and Milanovic, B. (2013). Global income distribution from the fall of the Berlin Wall to the Great Recession. *Policy research working paper 6719*. The World Bank.
- [17] Lee, E. Y. J. (2015). Trans-Pacific Partnership (TPP) as a US Strategic Alliance Initiative under the G2 System: Legal and Political Implications. *JE Asia & Int'l L*, vol. 8. iss. 2, pp 323-352.
- [18] Liu, X. and Ornelas, E. (2014). Free Trade Agreements and the Consolidation of Democracy. *American Economic Journal: Macroeconomics*, 2014, vol. 6. iss. 2, pp. 29-70.
- [19] Mansfield, E. D. and Milner, H. V. and Rosendorff, B. P. (2000). Free to trade: Democracies, autocracies, and international trade. *American Political Science Review*, vol. 94, iss. 02, pp. 305-321.
- [20] Martin, P. and Mayer, T. and Thoenig, M. (2008b). Civil wars and international trade. *Journal of the European Economic Association*, vol. 6. iss. 2-3, pp. 541-550.
- [21] Martin, P. and Mayer, T. and Thoenig, M. (2008) Make trade not war? *The Review of Economic Studies*, vol. 75, iss. 3, pp. 865-900.
- [22] Martin, P. and Mayer, T. and Thoenig, M. (2010). The geography of conflicts and free trade agreements. *Discussion Paper No. 7740*. Centre for Economic Policy Research.
- [23] Mayer, T. and Thoenig, M. (2016). Regional Trade Agreements and the Pacification of Eastern Africa. *Working Paper*. London: International Growth Centre.
- [24] Nedelka E. (2012). Economic Openness and Financial Integration in Asia In *International Conference on European Integration 2012*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 238-247.
- [25] Nelson, P. A. (2012). The Lisbon Treaty effect: toward a new EU-Japan economic and trade partnership?. In *Japan forum*. Vol. 24, No. 3, pp. 339-368.
- [26] Petri P. A. and Plummer, M. G. (2016). The economic effects of the Trans-Pacific Partnership: New estimates. *Working paper series 16-2*, Peterson Institute for International Economics.
- [27] Söderberg, M. (2012) Introduction: where is the EU–Japan relationship heading? In *Japan Forum*. Vol. 24, No. 3, pp. 249-263.
- [28] Suzuki, H. (2017) The new politics of trade: EU-Japan. *Journal of European Integration*. vol. 39, iss. 7, pp. 875-889.
- [29] The White House (2017). *Presidential Memorandum Regarding Withdrawal of the United States from the Trans-Pacific Partnership Negotiations and Agreement* [online]. [cit. 15. 11. 2017]. Available at: <https://www.whitehouse.gov/the-press-office/2017/01/23/presidential-memorandum-regarding-withdrawal-united-states-trans-pacific>.

- [30] The World Bank (2016). Weak Investment in Uncertain Times. *Global Economic Prospects*, pp. 99-108.
- [31] Wesley, M. (2015). Trade agreements and strategic rivalry in Asia. *Australian Journal of International Affairs*, vol. 69 iss. 5, pp. 479-495.

## Selected Problems of the Contemporary European Economic Integration Development

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### **Abstract**

*The European integration includes several dimension that altogether form the European society as a supranational community based on voluntary community of Member States. By other social sciences focusing on the actual challenge of the European integration project from various points of view (compare Cini and Šuplata, 2017; Dinan, 2017, Verdun, 2017) no doubt the economic dimension represents one of the most fundamental impacts on the shape of the integration which in the optimal case should prefer economic laws before political declarations. The actual integration problems reveal that it was to great extent not the case in the past EU integration developments. The main aim of the paper is to identify selected problems of the contemporary European economic integration developments with a special emphasis on economic processes on both national and supranational level. The paper argues for redirecting state interventionism towards solving of traditional political problems - related especially to security and defense – as a part of fundamental reform of integration processes. On the other hand it prefers that economic activities should be reserved preferably by main economic actors composed of firms and households.*

**Keywords:** *economic integration, Europe, Europe in crisis, European integration, future of Europe*

**JEL Classification:** F02, F15, E60

### **1. Introduction**

The conflict between politics and economics, between political power, and economic laws exists since the very beginning of economics as a science (Sinn, 2016) that had formulated these market-based laws as a natural and free social order. The market system that was in the 19<sup>th</sup> century the closest to the ideal of perfect competition has enabled the unprecedented development of the industrial economy. Developments in the first half of the 20<sup>th</sup> century characterized by two major military conflicts in the history of humanity and consequently by historically the most serious economic crisis, led to the prevailing beliefs of the loss of the market self-regulatory capabilities demanding - to remedy market failures by power, i. e. by the state. Emerging influence of socialist doctrines in this period demanded even radical solutions such as replacement of market and private ownership by social ownership and by the centrally planned economy. In some parts of the world, these ideas in real terms realized through state ownership and state regulation, while grasping the political power in the socialist revolution was a decisive precondition for fundamental societal and economic changes. Consequently, the world after the World War II broke into two antagonistic systems.

Both - the end of the most destructive world war in history and the emergence of a new societal system – became the most evident in Europe. It had significant influence on its post-war

developments, *inter alia* by searching and shaping a new form of international relations – the integration. The difference between the two systems was reflected in two different concepts and perception of integration. However, not even the socialist economic integration concept was able to save the system, which - after a few decades of existence on purely ideological principles and political power – in the end collapsed.

Integration in the western part of the continent was primarily motivated politically - to prevent further war conflicts in Europe as well as to build barriers against the spread of Soviet communism. The development of economic integration in democratic countries was conditioned by overcoming national differences and interests. This was also reflected in different and sometimes even opposite views on the nature and the objectives of the integration processes. There were two main approaches realized in practice: first, based on the idea of ever closer intergovernmental cooperation between sovereign states (European Free Trade Association), second, arguing for the necessity to create a common supranational single economic and political entity (European Union).

## **2. Problem Formulation and Methodology**

The developments in integration process of the past turbulent decades confirm that the second approach prevailed. This led to relatively swift creation of common market and to monetary union. The beginning of the third millennium following the collapse of centrally planned economies brought widening of the western integration further to the of Central and Eastern countries of the “old continent”. In the second half of the first decade, the integration was tested by the financial and economic crisis, which affected particularly the economically most developed countries with the most harmful impacts in the post-war history.

The last crisis has shown it was not just one of the stages of a more or less regular business cycle with more or less "traditional impacts" – like a decline in growth, trade, investment, employment. It revealed serious problems in the integration process that destabilized the European Union and threatened its further development. The impacts of the crisis have motivated to take measures in order to mitigate the downturn in the economy. However, the consequences of the measures also contributed to the rise of another problem - the debt crisis. The accumulation and severity of crisis problems has become a subject of numerous analyses trying to find out about their origin and proposing options for their solution and for the future direction of the whole integration process.

Our approach is based on the assumption that the actual cumulation of crisis problems is not accidental but it rather occurred as a (direct) consequence of the chosen integration concept and of its implementation over the past fifty years - under the conditions of a mixed economy, which in reality led to growing state interventionism.

## **3. Market Versus State**

The main economic preconditions of the real integration were the small size of most western European economies and the high level of their industrial development requiring a substantially larger market for their production. It is, however, more important to emphasize that integration is a deliberately politically driven process based on predetermined goals, using selected tools and institutions with distinctive subjective elements. The former process of internationalization of economic relations, naturally regulated by the market, has been in the “new” integration form largely under the control of political power.

The supremacy of political goals and tools over economic integration processes accompanied the general transformation of the market economy into a mixed economy based of Keynesian principles. The Great Depression followed by the World War II have strengthened the position of the state (policy), and its interventions and regulation have become an indispensable and a permanent part not only of economic life. Economic policy has been institutionalized by numerous political bodies, dozens of ministries or departments with hundreds or thousands of officials daily carrying out their political-interventionist agenda (Vaubel, 2010).

Particularly important became the formation of a social mentality accepting these fundamental changes, especially under the influence of the negative experiences of Great Depression and War Destruction in the 1930s and 1940s. It seemed logical that only an institution with legitimate power tools could prevent the destructive development in the future. In the social consciousness, the state ceased to be the "necessary evil" and turned to be a source of benefits. Economic theory contributed to the development of market failures theory (Samuelson, 1947) and the gradual transformation to mathematical modelling of the conditions of economic equilibrium under conditions of permanent state interventions.

In such changing circumstances, immediately after the war, the parallel expanding idea of integration was reflecting, primarily a need for an international guarantee to ensure lasting peace. With the start of the "Cold War" the cooperation of western countries in this area became institutionalized by creation of the NATO in 1949. The priority of cooperation focused on the politico-military area was natural, although the western European attempts were not quite successful. Also, the economic cooperation was originally motivated politically with aim to subordinate under the joint supranational control the German and French mountain industries. These efforts started by six founding member states (France, Germany, Italy, Belgium, Luxembourg the Netherlands), led to creation of the European Coal and Steel Community (ESCS) in 1952. The subsequent developments of economic integration and creation of European Economic Area (EEC) firstly, defined the political goal of creating a single economic and political entity. Secondly the economic integration was taking place in national economies of Western European countries in times of growing interventionism when large companies are being privatized, and the economic policy permanently affects the socio-economic system.

The proportion between the market and the state in individual Member states, or, the extent of the state's influence, as well as the instruments and the application of economic policy, were different and changed by further developments, however, the mixed economy became a prevailing reality. State interventions and regulations have spread to other areas - social security, the environment, the expansion of public goods (education, health) - justified by the inability of the market to efficiently respond to the needs in these areas.

Nowadays, confronting the immediate mixed economy with the market economy on the macro level is impossible, as all world economies (except North Korea and Cuba) are perceived as mixed. On the other hand, the comparison of the market or mixed (partly market) economy, on the one hand, with a centrally regulated economy, on the other hand, speaks clearly in favour of the market (or partly market) economy and against state-regulated economy. Although in case of centrally regulated economies it was about a connection of politics with an ideology contradicting to simple economic rules, the negative influence of politics itself cannot be denied, i.e. a power element in the whole system that directly controlled the processes of the socialist economy and which in the end collapsed.

Therefore, the assumption that the power elements of politics can be more destructive than "market failures" or that, in general, voluntary market relations are more effective than

involuntary, power relations, is a legitimate theoretical premise. Just as the assumption that market failures are not automatically remedied by a power measure.

There are many examples from the economic practice that actually document these assumptions. For example, monopolization is not only a privileged position for increasing prices and profits, but also a more efficient use of resources through economies of scale, the development of cutting-edge science and technology, and the employment of hundreds of thousands of workers. Similarly, public education or public healthcare does not automatically offer higher standards than the private providing of these services. The externality of environmental damage is often not only the result of the lack of protection and use of property rights, which is to be guaranteed by the legal system, i.e. the state.

On the other hand, state failures like corruption, clientelism, wastage of public funds, increasing bureaucracy of economic and social activity underline serious shortcomings in the intervention-regulatory system. Especially in countries of Central and Eastern Europe there is mostly (or only to a lesser extent) no historical experience with the democratic system, and market regulation was interrupted for decades. However, such experiences also exist in western countries, where interventionist economic policies have spread since the World War II.

The differences among countries, their economic level, are related not only to their overall historical development but also to the post-economic impact of economic policy. Extensive state interventions, nationalization of ownership of large corporations, and expanding post-war planning in many advanced Western countries, often accompanied by an increase of trade union influence and welfare state building, resulted in stagflation of the economy in the 1970s. Its solution was associated with the emergence of neoconservative theory and economic policy based on the limitation of state interventions, on deregulations and on the expansion of market regulatory elements. This liberalization has made it possible to reduce inflation, to accelerate economic growth and create space for the rapid development of modern information technologies since the 1980s.

It is worth mentioning that the post-war development in Germany, where the rapid restoration of the ruined country and economic growth, known as the German "economic miracle," was the result of L. Erhard's successful *ordo-liberal* economic policy. The state had an irreplaceable place in it however its measures were focused in particular, on creating a political and legal framework for the efficient functioning of the market system. Similarly, developments in many developing countries have recorded significantly faster economic growth since the 1990s, mainly due to pro-market reforms and restrictions on government interventions and regulations.

If we add to this the necessity of transforming the centrally planned economies into market ones - after decades of total state regulation and economic (societal) effects in the form of their significant lagging behind, which will take decades to overcome - it is clear which element of the mixed economy seems to be more efficient. Obviously, there is no need for the cancellation of the state, but for a serious reconsideration of the mix of the market and the state in the mixed economy in favour of the market economy.

#### **4. Selected Challenges for the Future Concept of European Economic Integration**

This principle is valid not only for the national level, but generally, as well as for the integration on the supranational level. Hayek, during the war in his famous work, *Road to Serfdom* (1944),

warned that: "*the problems raised by a conscious direction of economic affairs on a national scale inevitably assume even greater dimensions when the same is attempted internationally.*" (Hayek, 1990, p. 168). Although he formulated these views in different societal conditions, even today, attempts to manage and plan on the national, supranational or international level are largely just the "*exposed majesty of power*".

The up-to-date progress of integration and its outcome in the financial, economic and debt crisis in principle confirm these ideas. Directing the integration process towards closer economic, monetary and political union - the creation of the "super-state" - is not only a clearly politically determined goal but, above all, a political project implemented from the centre mainly by political instruments and institutions. Adjusting differentiated views of individual countries or their representatives in the process of deepening integration is increasingly demanding, and therefore requires more centralized decision-making.

The realization of the original integration goal of building-up "the United States of Europe", and in particular the attempt to centrally accelerate these processes, reveals several problems. One of them is the fact that the differences of opinions and interests do not separate only the national borders of individual countries. National interests can also be defined, but the border between different views in different areas of integration goes across countries and differentiates society within them. It is also documented by a variety of political parties in each member country with different contents of their programs on integration issues. They are the result of democracy and its manifestations in various political activities of citizens - elections, petitions, referendums - demonstrating the natural diversity of the society.

The problem is if the differences between opinions (interests) bring increased tensions, conflicts and threats that an obstacle for a serious discussion. One of the consequences is division into so-called "Euro-optimists" and "Euro-pessimists". This has been usually labelled by so called "Euro-optimists", considering all the others, as well as considerably differentiated views in principle as anti-European ones.). Such simplification among other, avoids open debates and clear differentiation and distinction between genuinely nationalistic and xenophobic views.

This is closely related to another problem of limiting democracy. One of the positive expectations of the accession of the eastern European countries to the EU was the enlargement and the firm establishment of democracy in their political systems (Gubová, 2016; Loužek, 2017) which historically were suffering from various transformational problems (e.g. 1990's in Slovakia). This crisis development, together with the migration crisis and by its impacts, is accompanied by an increased pessimism on democracy, and its ability to effectively influence future developments. This is reflected, for example, in the rejection of the results of democratic processes - repeated referendums in some Member States (Ireland, Denmark...), or pressure to repeat the referendum on the Brexit in the United Kingdom.

The problem of democratic deficit in the formation and functioning of several EU institutions is well known (Vaubel, 2010). It appears by the limited competencies of the European Parliament as the only supranational body elected by citizens (compare Shackleton, 2017), by appointments to the highest positions in the other institutions and the practical irrevocability of the appointed ones, asymmetric influence on the decision-making processes according to the size of a member country etc. Generally restricting democracy also strengthens the centralized and autocratic tendencies in managing and designing further integration developments that increase tensions and instability in the EU.

## **5. Problems of the Financial System**

The most serious problems in the relationship between the economy and the policy on all levels, but the most pronounced in the last decade in the EU include the functioning of the financial system, the euro area. Here, the predominance of the power over the economic laws is the most significant, conditioned by both long-term historical development and by the specificities of this system.

Historically, the issue of money and the financial system is linked, on the one hand, to the particular interests of the political sphere, for which the concentration of wealth in monetary form and its power of dominance has a fundamental or even existential significance. At the same time, the peculiarity of the original money exchange function has allowed, together with gradual development of trade, to turn from the form from "metallic" money into "fiat money". The connection of power with the "fiat money" has had, especially in the age of modern economics, a very contradictory effect. On the one hand, it encouraged faster economic growth, which became an economic synonym of progress and of creation of social wealth. On the other hand, the power of decision-making that does not respect economic laws (even with good intentions) has repeatedly led to crises and to destruction of wealth. Changes of the amount of money determined by the power greatly affect the functioning of the economy. That is why some authors consider the credit expansion, initiated and executed by the state, to be a decisive cause of the crisis and which was able both to predict and consistently explain the two most serious economic crises in the last hundred years.

The original intention of Keynes to regulate the amount of money according to the actual development of the economic cycle was disturbed by other elements that led to a constant increase of the money supply and caused more or less inflationary tendencies deforming real market conditions. Failure to respect elementary economic rules and their replacement by policy objectives has had serious impacts on the economic stability. Another grave problem (with even more harmful implications) is the disrespect towards own, self-created standards, rules, laws, agreements, violations and purposeful replacement in a short term by other ones. This increases destabilization of the economic system and contributes to deepening the crises and prolongs its duration.

As shown by the crisis in the Eurozone on the supranational level this can lead not only to serious economic problems but also to a threat of the integration process as such. The "quasi-positive" aspect may be considered that numerous analyses of the financial crisis and the Eurozone have revealed practical shortcomings and problems that before the crisis were considered to be only a theory (Bagus, Woods, Sinn, Gonda, Louzek). It can be summarized from analysis that the financial market is an extremely regulated market. Central banks define money supply, base interest rates; create space for unsecured lending, debt, inflation, risk of massive withdrawals of bank deposits, rescue bankrupt banks contribute to excessive cyclical fluctuations, including financial crises. As monetary-financial monopolies, by influencing money quantity, they prevent currency competition and bring fake signals to the market. The risk of such a system has increased with the break-up of the Bretton Woods Monetary System in the 1970s.

According to Gonda, financial problems are primarily a result of central distortion and the destruction of finances by government interventions, central banks and by supranational institutions. He considers the universal causes to be the creation of a system of uncovered symbolic currencies and over-funded public spending leading to growing debt. The fundamental distortion of the financial system is deepened especially by the tendency to increase the government redistribution supported by "entitlement" to public resources, various models of the welfare state, and increasing reliance on the state (Gonda, 2012).



Even on the euro level, there are the universal causes of financial system problems that are followed by other systemic causes:

- '1. The Eurozone as a currency union with a supranational monetary monopoly of fiat money,
  2. The Euro as part of European economic integration, increasingly built on centrally managed harmonization and central regulations,
  3. Monetary-fiscal institutional set-up in the EMU, in the Eurosystem and in the ECB's policy,
  4. Non-Flexible, Regulated Conditions, and Other systemic euro-causes of problems'
- (Gonda, 2012, p. 25).

## 6. Conclusion

The conclusions of the analyses (not only of the authors of the paper) are in principle calling for the necessity to reform the financial system as a main precondition for the fundamental solution to the financial and debt crisis but also for the further development of economic integration in Europe. This approach does not imply an equal or uniform view of EU reform. There are several options for EU development, in which economic decisions do not have to play a secondary role after the political ones (Navrátil, 2016). More options were presented by the European Commission in March 2017 in the Future of Europe (European Commission, 2017)

An initial common feature of this approach is the rejection of the only and the necessary solution (a “medicament for all actual problems of Europe” is an increasingly narrower and deeper integration. Increase of regulations and the growing welfare state are hampering economic growth. The euro has not become an “engine”, but rather a “brake” of prosperity. Or, the comparison of the pace of growth of the member and non-euro area countries does not show any significant differences (Riedel, 2017). The reason lies in the policy making that turned the European project into a myth.

The public choice theory emphasizes that integration is not a result of the altruism of its actors but rather the pursuit of their individual or group interests. If politicians are, under increasing public pressure, are able to change these interests into public interests, a more fundamental reform might be possible, without having to abolish the common currency (Loužek, 2017). Similarly, Bagus, favours the option to preserve the euro provided that politicians will respects economic rules preventing the changeover of the monetary union to the transfer union.

Gonda argues that external pressure in the form of serious financial shocks - inflation, depreciation of savings, and so on - can help solve problems in the euro area - together with the public pressure on politicians. This however requires also changes in the social mentality leading for instance to refusal: to live “on a debt”; a belief in a state of no failures, including issuing any quantity of money and high state expenditures. Part of the formation of the “new mentality” should be the understanding of the importance of personal freedom, responsibility, decision making and initiative, respect for property rights, competition, diversity, voluntary cooperation, solidarity, diligence, honesty, etc. that have in long term shaped the expansion of the market system. Gonda is in principle not advocating the abolition of the euro, provided that it would be exposed to market competition by other currencies.

Sinn, also accepts keeping the common currency, but only following "a cure" that involves, for example, the exit of highly indebted Eurozone countries, new Euro-system arrangements

in order to prevent debt bubbles, the creation of options and clear entry and exit rules into and from the Eurozone, bankruptcy rules for Eurozone countries (Sinn, 2016).

The authors of this paper share the view that it is less important whether one common currency or national currencies is functioning. What is more important is that the entire financial system is gradually transformed into a truly market-based economy, enabling extensive use of market regulation in the economy at national and transnational levels.

It is also not decisive today whether a supranational state entity or a system of closer relations between sovereign nation states will be created in the future. It is, however, important that further European economic integration would be set up as the formation of a system of relations, in particular, between economic actors in the market economy space and that space for natural evolution in the field of international integration would be created. Developments at the inter-subject economic level for which policy-making should create an adequate legal framework should be the decisive creator of the form and nature of economic integration as well as of its future direction.

It is needed to take into account the resistances arising from the connection of the current politico-bureaucratic apparatus, with the ever more centralized model of further integration development. The EU is a colossus that is hitting barriers and is under a constant threat of disintegration. When thinking about further developments, it is necessary to lose sight of the real meaning of the original vision of a lasting, peaceful Europe, especially in growing global turbulence. Last but not least, it is also necessary to respect the economic norms that enable the active participation of economic subjects (citizens, households, enterprises) in the formation of an effective (optimal) form of integration relations.

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### **References**

- [1] Bagus, P. (2010). *The Tragedy of the Euro*. Auburn: Mises Institute.
- [2] Cini, M. & Šuplata, M. (2017) Policy leadership in the European Commission: the regulation of EU mobile roaming charges, In: *Journal of European Integration*, 39:2,143-156, DOI: 10.1080/07036337.2016.1275607
- [3] Dinan, D. (2017) Leadership in the European Council: an assessment of Herman Van Rompuy's presidency, In: *Journal of European Integration*, 39:2, 157-173, DOI:10.1080/07036337.2016.1278442
- [4] Gubová, O. (2016). Limits of Liberal Democracy in V4 Countries in Context of EU Imbalance between Economic and Politic Integration. In: Kovářová, E., Melecký, L. and Staničková, M. (eds.) In: *International Conference on European Integration 2016*. Ostrava: VŠB – Technical University of Ostrava, 2016, pp. 282 – 290
- [4] Gonda, P. (2012). *Eurozóna a alternatívy európskej ekonomickej integrácie*. Bratislava: KI M. R. Štefánika.
- [5] European Commission (2017). *White Paper on the Future of Europe. Reflections and scenarios for the EU 27 by 2025*. European Commission, Brusel.

- [6] Hayek, F. A. (1976). *The Road to Serfdom*. Chicago: University of Chicago Press.
- [7] Loužek, M. (2017). *Evropská integrace z pohledu teorie veřejné volby*. Praha: Karolinum.
- [8] Navrátil, B. (2016). Ever-Closer or Multi-Speed Union. In: Kovářová, E., Melecký, L. and Staničková, M. (eds.) In: *International Conference on European Integration 2016*. Ostrava: VŠB – Technical University of Ostrava, 2016, pp. 649 – 655.
- [9] Riedel, R. (2016). Euro-scepticism of Euro-enthusiasts. In: Kovářová, E., Melecký, L. and Staničková, M. (eds.) In: *International Conference on European Integration 2016*. Ostrava: VŠB – Technical University of Ostrava, 2016, pp. 808 – 812.
- [10] Sinn, H. W. (2016). *V pasti eura*. Brno: Centrum pro studium demokracie a kultury.
- [11] Samuelson, P. (1947). *Foundations of Economic Analysis*. Cambridge, Mass.: Harvard University Press.
- [12] Shackleton, M. (2017) Transforming representative democracy in the EU? The role of the European Parliament, *Journal of European Integration*, 39:2, 191-205, DOI:10.1080/07036337.2016.1277713
- [13] Vaubel, R. (2010). *Evropské instituce jako zájmová skupina*. Praha. Centrum pro ekonomiku a politiku. 978-80-86547-83-1.
- [14] Verdun, A. (2017) Political leadership of the European Central Bank, In: *Journal of European Integration*, 39:2, 207-221, DOI: 10.1080/07036337.2016.1277715
- [15] Woods, T. E. jr. (2010). *Krach*. Praha: Dokořán.

## **The European Union at a Crucial Crossroads – Survives or Finishes?**

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### **Abstract**

*The article deals with the European Union's evolution, some key issues and reasons that should be investigated for its next hopeful development and perspective future. What has been happening with the Union? Why does the Union have a hazy future? These questions are actual just now, when all Member States endeavour to discuss the EU's future and to find its most acceptable format. The weakness of these debates consists in exploring mainly some issues belonging to the Union's politico-economic superstructure, not to its value basis including decisive pillars of its existence. However, the European elite till now have not offered any vision of the future EU generally acceptable by Member States and, mainly, by their citizens. The main goal of the article is so to present a critical reaction to the mentioned problems and to submit some key open issues for debates on the future EU.*

**Key words:** *challenges to the Union, future EU, key issues for EU debates, White Paper*

**JEL Classification:** *F15, K49, P17*

### **1. Introduction**

European integration is occurring on a key crossroads of its evolution. A goal of next evolution should be the shaping and strengthening of a general and rigorously respected democratic, community and decision-making bases, and all that have to be done with active participation of European citizens. The European integration process is to be inevitably revised and shaped, first of all, with a goal to decrease democracy deficit and to reduce influences of one-sided interests of European globalist elite. This process should be so expressively improved and actually redefined to ensure again the respecting and applying of the traditional (original) principles, fundamentals and values of the successful starting and initial routing of European integration. The routing of integration must not move away the EU's citizens, but it must approach them as much as possible.

In search of a new shape of European integration, there is inevitable strictly to consider carefully also those facts that characterize and determine today's globalized world and exercise an influence on character, form and contents of very integration. These cover e.g. the bigger interconnecting of the world, diffusing the sovereignty of nation states into crisscrossing of roped state subjects and various other actors with a significant impact on international relations, the growing stronger of processes of decentralization, disintegration and regionalization of the world as a counter-balance towards globalization, or spontaneous enlargement of a catalogue of collective human rights (Hrivik, 2008).

The European Union (EU) has faced the most challenging political environment since the starting of post-war European integration by foundation of the first three European Communities (Hooghe, 2016). This includes economic consequences of the Eurozone crisis and persistently high levels of inequality, the aftermath of the largest refugee crisis since the Second World War, the running withdrawal of the United Kingdom (UK) from the EU (Brexit), and the rise of populist, radical, extremist and anti-EU parties in the EU's Member States (Stockemer, 2017) alongside a drift towards illiberal and Eurosceptic politics in Central and Eastern Europe (CEE). These issues have eroded the EU's legitimacy and solidarity, as well as the capacity and ability of Member States to build consensus on a way forward, on the Union's future.

These challenges demand those, committed to the value of European integration, to reconsider carefully the EU's routing, including what its future scope and structure should be. Such a discussion is a key component of steering the Union from crisis management to political and economic renewal. However, a prerequisite for a meaningful debate and effective responses is to understand better current public and elite attitudes to the Union, as this is the foundation upon which its future will be built (Raines et al., 2017).

## **2. Critique of the Commission's Conception of Forming the Next EU**

The Union is now mired in a deep existential crisis, and its future is very much in doubt. The symptoms are everywhere – above-mentioned Brexit, crushing levels of youth unemployment in Greece and Spain, debt of Italy (up-to 132 % GDP) and its stagnation as the third most powerful economics of the Eurozone, the rise of populist, extremist and radical movements in all Member States of the Union (Wagner, Meyer, 2017), a backlash against the euro, massive, non-regular migration and mainly against the Unitarian way of redistributing migrants (Kelemen, 2017). All these symptoms point to the need for revision of the EU's Founding Treaties in Lisbon wording, reforming and balancing relations between supranational and intergovernmental subjects of integration and for a major overhaul of the Union's institutions.

In an effort to react to these serious issues, on 1 March 2017 the Commission published its document under the name "White Paper on the Future of Europe (Reflections and Scenarios for the EU27 by 2025)". The Paper sets out the five following possible paths of the EU-27's evolution by the year of 2025 (European Commission, 2017):

1. "Carry on with the current agenda in next routing of the EU" means the Union will focus on implementing and upgrading its current reform agenda.
2. "Focus just on the EU's single market" – the Union will gradually put mind, mainly and first of all, to its supranational common internal market and corresponding policies.
3. "Allow those who want more do more" – the Union creates a space to those Member States wishing to cooperate more and deeply in some concrete spheres.
4. "Do less but more efficiently in integration evolution" – the Union will concentrate on selected spheres of some European policies in which it will act more and faster whereby in other political fields it will do less.
5. "Do much more together" – the Union will decide to act much more jointly in all European policies.

The presented White Paper pertains mainly to some EU's policies, especially their development within the frame of a supranational integrating paradigm. The document is too general, less tangible, "optimistically" tuned and unilaterally directed mainly for the needs of some main global players of the Union.

The scenarios of the EU's future development are formulated exclusively in its top floors (i.e. within the Union's superstructure). These variants so do not come from the needs of the EU's structural basis where existential symptoms of the very Union are situated. A priority issue is thus, and first of all, the today's destiny of essential ideological principles, fundamentals and characteristics on which the successful development of European integration was founded with a long-term evolutionary perspective. Here can be included in e.g. principles of general non-discrimination, transparency in commercial relations and free economic competition in a space of the supranational European market, moreover community principles of building and functioning of the European Communities and EU, universal political principles and structural law fundamentals in the present Union, individual human rights, or the functioning axioms of the Eurozone and so on. Pursuant to them, new aims, priorities or strategic documents of the EU are often formulated, which some of them belong above all to competencies of a centralized (federal) state than an integration formation (e.g. achievement of saving in taxation and social areas, respecting and applying of questionable ideologies of gender, LGBTI, political correctness and multiculturalism in decision-making and legislative processes, or an issue of shaping any common European armed forces).

The White Paper one-sidedly determines the frame and routing of following discussions on the future EU. It presents conceptions and notions formulated at the highest European political level, similarly as in a case of the failed EU Constitutional Treaty (2004). Despite an undoubted effort of the Commission to bravely meet solving some relevant issues of the Union's functioning and evolution, the Paper can be regarded as an expressive disappointment. It namely confines itself, more or less, to some selected super-structural questions of the EU, outside its structural basis where are situated fundamental pillars of the EU's existence, security, stability and solidarity which should be preferentially discussed because their weakening does not predict a promising future to the Union.

Moreover, the Commission's document sidesteps the central challenge that the EU must confront and overcome. If European democracies are to regain their welfare, economic and political dimensions of integration cannot remain out of sync. Either the political dimension catches up with economic one, or economic integration needs to be scaled back. As long as this decision is evaded, the EU will remain dysfunctional (Rodrik, [online] 2017). When confronted with this stark choice, Member States are likely to end up in different positions along the continuum of economic-political integration. This implies that the Union must develop the flexibility, decisiveness, ability of redefining of the content and forms of actual integration paradigms and feasible institutional arrangements to accommodate them. From the very beginning, the EU was first of all built on a functionalist reasoning – political integration should follow economic one.

The "dreaming" of the governmental European elite, expressed first of all in some expressively optimistic scenarios (namely in scenarios No. 4 or 5), hardly finds a major approval of Member States, first of all a major support at their citizens. The presented scenarios are nothing especial in the evolution of European integration. They appeared in the past in various forms in the effort to incorporate some sensitive political and security themes into the mainstream of economic integration. These integration initiatives were indeed unsuccessful but, on the other hand, they meant a very good source of new findings, information and experiences (Hrivik, 2013) or (Kana, Mynarzova, 2014).

The White Paper does not mention some issues being problematic for promising evolution of the EU. We can start with national egoism of some great Member States (mainly Germany and France) and their enormous impact on decision-making which are strongly present in the life of the contemporary Union. The Paper says nothing on existence of democracy deficit in the

very Union, on its reasons and removing, on problematic shaping the European identity, on hazy finality of the EU, on disintegrating phenomena and their reasons, on advantages, disadvantages and consequences of the applying of political correctness and multiculturalism being controversially perceived in many Member States (mainly in CEE) and their impact on the Union's life and its stability, and finally which cultural-civilization values, according to the Commission, should be spiritual and mental pillars for the future EU.

Moreover, in the text of the White Paper there is missing information on the possible reducing of an anomalously large-scale, still growing and, in its extent, "sick" bureaucratic centralism in Brussels. The document does not put forward any reasons and expected consequences of Brexit on the EU and its Members, any reasons of strengthening of populism, extremism, radicalism and anti-EU political movements in the contemporary Union, nor analysis of their origin. These are extraordinarily important for avoiding of further possible disintegrating the Union which is today extremely probable (Hrivík, 2017).

In the foreign-political sphere, the White Paper does not evaluate an issue of developing the Union's relations with the US after inauguration of Donald Trump as a new American President. The Commission should have clearly reacted to Trump's governmental strategy preferring the USA's bilateral contacts and negotiations with Member States to the EU as a bloc. Will the US still remain as a strategic partner for the EU like before?

### **3. Some Open Issues for Debates on the Future EU**

The EU is today caught between competing pressures along three fronts: a disconnect between the elite and public, a public that is divided over values, and the elite that lacks consensus on key issues that will shape Europe's future. Among these divisions, EU leaders are trying to steady the ship. Shows of unity in response to Brexit and more positive economic growth figures in the previous year have helped provide greater calm. There is a sense that there may now be a space for the EU to consider its long-term shape and identity in the post-Brexit period, and a process of political renewal might now supplant constant crisis management. This will require that the Union undertakes the issue of political legitimacy.

The EU may lack the intrinsic legitimacy of a nation state but it has historically sought to derive legitimacy in two ways. In the first, political legitimacy is built upon the profits and advantages that integration brings in terms of inducements and rights for citizens (sometimes named as 'output' legitimacy). In the second, political legitimacy comes from greater citizen participation in and constant oversight of the EU's decision-making through enhanced democracy, transparency and accountability (sometimes named as 'input' legitimacy). Both these approaches to the EU's legitimacy appear weak at present. Recent crises, particularly over the euro, have corroded the economic fortunes of southern Member States and have generated divergence rather than convergence between its economies and societies, undermining the sense that the Union is an engine of prosperity (Raines et al., 2017).

Some challenges do not have simple solutions. However, they are covering the important implications for the discussion about the future of the EU. The Union's politics has moved from a period in which it was mediating between an integrationist political class and an occasionally sceptical public to one in which there is a more mixed picture among the public and elite. The two greatest policy challenges of the past decade – the Eurozone and massive refugee crises – were amplified by the same issue: a partial process of integration with EMU without Fiscal Union and the removal of internal EU borders without a full-valued common EU external border. The process of integration is incomplete, but the way forwards (or even backwards) is highly contested.

While the EU's Head-office in Brussels may be convinced of the longer-term need for deeper integration (and so it is), there is no consensus among the elite about the balance of powers between the Union and Member States or about a federalist vision. In the absence of a majority view on the way forward, this creates the need and opportunity for political leadership based on a longer-term vision for the future, if there is the political space for such leadership to emerge. The improving of EU economy and the relative political stability, which after the 2017 year's elections in some Member States could perhaps descend also on Germany and France as the engines of integration, may create a once-in-a-generation opportunity for a process of political and economic renewal.

As part of this political renewal process, decision-makers and leaders within the EU should recognize the diversity of perspectives over its future. At times, the debate has been reduced to a crude binary choice between 'more' or 'less' Europe, between a loosely defined notion of deeper integration and full-blown fragmentation. But, actual development of European integration undoubtedly confirms that there is a far broader diversity of perspectives among the public and elite (Raines et al., 2017).

A European debate that does not reflect the breadth of the public's attitudes or give space to critics, and that delegitimizes opposition too quickly, will inevitably alienate many among the public and may serve to strengthen anti-EU forces rather than to undermine them. The last period has demonstrated the way the political actions of the Union can affect the very fundamentals of political life. However, its approach still often reflects 'policy without politics' where the market place of ideas, the true essence of democracy, has too often been replaced by bland consensus (Schmidt, 2010). Genuine political renewal in Europe will require a richer, broader and perhaps even a more conflicting discussion.

Strong and entrenched public anxiety over identity issues, which is increasingly merging with security concerns, is likely to increase as the EU experiences further acts of terrorism and rising rates of ethnic, cultural and religious diversity. Populist right movements will continue to find resonance among the public when they try to amplify such concerns into broader opposition towards the EU. Wider strategies could be suitable to engage more authoritarian-minded voters and to reframe debates about non-regular massive immigration in such a way as to openly discuss and better understand it (Nenicka, 2016), to impartially investigate reasons of the public's perceiving it as a cultural and security threat and, if possible, to reduce such perceptions, and, finally, to try to find the best concrete solutions for massive migration.

Over the longer term, the leadership of the EU institutions, civil society and business will have to invest far more in attempting to close the gap between their own attitudes and those of many citizens in the realm of identity politics and, specifically, immigration (Nova, 2016). For all the challenges and prevailing pessimism, the EU still has extraordinary strength. It should remain politically stable compared with much of the globe, some of its economies are among the most competitive in the world, and it has some of the healthiest, wealthiest and most equal societies. The challenge for the EU is to utilize these strengths and to build on the historic achievements of integration in a way that reflects economic needs and political realities over the coming decades. If it is to succeed and to thrive, the EU's leaders must think boldly and act quickly, prioritizing flexibility over a dogmatic access and engaging frankly with political realities as the first stage in a process of political renewal (Raines et al., 2017).

In the long term, solidarity requires not just a budget that reflects it, but also a public that believes in it. A lack of solidarity among Europeans reduces legitimacy of the EU institutions, lowers the costs that citizens will bear in pursuit of reforms and fans the flames of populist politics. But, there is a reservoir of support among the public and elite for some community or union based on solidarity.



#### 4. Conclusion

The European integration process can be successfully progressing also in this century if there will be respected original integrating and cultural-value principles, fundamentals and characteristics, which created the firm ideological basis for starting of post-war integration. Non-democratic governmental elite, carriers of ideology of political correctness and multiculturalism cannot be exclusive decisive actors of shaping this process (as we can see today). A great role will have to remain in the hands of Member States, their citizens and some legitimate European structures without external influence of those who account to none, only to themselves. Integration will probably obtain a new configuration and form, but must not lose its original sense and mission, fundamental human-rights' and citizen's features.

The Commission's White Paper should introduce a start of the decision-making process of the EU-27 on its next future. The single scenarios of expected evolution of the EU by 2025, which belong to the EU superstructure being too remote from citizens, are mutually overlapped in some cases. They are therefore neither mutually exclusive, nor exhaustive. It is assumed that the final outcome will undoubtedly look different to the way the scenarios are presented now. It can happen only at that time, if the all-European discussion will also include in itself key issues belonging to the structural basis of the Union with wide participation of European public. Only then the Union and its Member States can decide which attributes, principles and features, resulting from the discussion, should be crucial for advance in shaping the future stable, secure and prosperous EU, evidently in the general interest of European citizens. Alternatively, will some Member States make decision to leave the Union and so to follow a case of the UK?

Challenges, the EU must face today, have frequently generated divisive narratives between Member States on the known cleavages: north versus south, east versus west, creditors versus debtors. However, the importance and significance of the divide among different groups within the public are principally driven by differing conceptions of identity and community. If such a crucial fault line in the EU runs not between Member States but within them, this has important implications for how those who wish to strengthen the EU should respond.

One implication is that strategies for future European relations, that emphasize a differentiated way of integration among Member States in a 'multi-speed' system, do not reflect this fault line which cuts across the continent (Navratil, 2016). This suggests the need for a flexible approach to future integration that is built on more than one EU's hard-core and periphery. Secondly, it suggests such attitudes are unlikely to be changed solely by an improvement in economic status. Those, who wish to bolster a public support for the EU, cannot focus only on improving the economic experiences of the disadvantaged in society. The rise of Eurosceptic movements during previous periods of relative economic stability and growth should serve as a powerful reminder of the way in which perceptions of unfairness and relative deprivation are not always influenced by the immediate environment.

#### References

- [1] European Commission (2017). White Paper on the Future of Europe (Reflections and Scenarios for the EU27 by 2025). *COM (2017)2025*. Brussels: European Commission.

- [2] Hooghe, L. and Marks, G. (2016). Europe's Crises and Political Contestation. *Working paper* for the conference 'Theory Meets Crisis', Robert Schuman Centre. Florence: European Univ. Institute, 2016.
- [3] Hrivik, P. (2008). Attributes and Factors of Development of European Integration in the 21st Century. (in Slovak) In *Europe of the 21st Century: Diversity and Solidarity?* Brno: CES of Masaryk University, 2008. pp. 109-132.
- [4] Hrivik, P. (2013). Reflections on Shaping the EU's Security and Defence: the EU towards a Military Alliance? In *International relations 2013: Contemporary Issues of World Economics and Politics*. Bratislava: Faculty of International Relations EU. pp. 276-284.
- [5] Hrivik, P. (2017). What European Union Do Europeans Need? *Journal Political Science Forum*, vol. 6, iss. 2. Trenčin : Trenčin University of AD. pp. 5-23.
- [6] Kana, R. and Mynarzova, M. (2014). European Union's Contribution to Global Security. In *International Conference on European Integration*. Ostrava: VSB-TU Ostrava, Faculty of Economics, pp. 310-318.
- [7] Kelemen, R. D. (2017). *Europe's other democratic deficit: National authoritarianism in Europe's democratic Union, Government and Opposition* [online]. [cit.2017-10-9]. Available at: <https://doi.org/10.1017/gov.2016.41>.
- [8] Navratil, B. (2016). Ever-Closer or Multi-Speed Union. In *Intern. Conference on European Integration*. Ostrava: VSB-TU Ostrava, Faculty of Economics, pp. 656-662.
- [9] Nenicka, L. (2016). The Migration and the Search for European Identity. In *International Conference on European Integration*. Ostrava: VSB-TU Ostrava, Faculty of Economics, pp. 649-655.
- [10] Nova, M. (2016). Migration – Models and Principles of Immigrant Integration. In *International Conference on European Integration*. Ostrava: VSB-TU Ostrava, Faculty of Economics, pp. 673-677.
- [11] Raines, T. et al. (2017). The Future of Europe (Comparing Public and Elite Attitudes). *Research Paper No 208223*. London: The Royal Institute of International Affairs.
- [12] Rodrik, D. (2017). *How Much Europe Can Europe Tolerate?* [online]. [cit.2017-3-14]. Available at: <https://www.project-syndicate.org/commentary/-2017-03>.
- [13] Schmidt, V. A. (2010). *The European Union in search of political identity: Is more Politics the Answer?* Vienna: Institute for European Integration Research [online]. [cit.2017-10-9]. Available at: <https://eif.univie.ac.at/downloads/workingpapers/wp2010-05.pdf>.
- [14] Stockemer, D. (2017). The success of radical right-wing parties in Western European regions – new challenging findings. *Journal of Contemporary European Studies*, vol. 25, iss. 1, pp. 41–56.
- [15] Wagner, M. and Meyer, T. (2017). The radical right as niche parties? The ideological landscape of party systems in Western Europe. 1980-2014, *Political Studies*, vol. 65 iss. 1, pp. 84–107.

# The Economic Freedom Index as a Measure of the Competitiveness of EU Companies

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## **Abstract**

*In the context of European integration, the competitiveness of EU companies is very important due to the dynamics of international developments. The economic freedom index is one of the most important indexes on the basis of which the global economies are ranked, assessing the 12 measures of economic freedom (divided into four main categories) and grouping the countries according to the best conditions for the development of enterprises (defining them as liberal economies), then good, average and those that are completely non-marketable (illiberal) and do not create opportunities for growth for their businesses. The aim of the article is to classify the 28 EU countries into individual groups and to characterize them in comparison to the five countries of the world that create the best and worst development conditions for their businesses. The article was developed on the basis of the latest report (data from 2018) published for 24 years by The Heritage Foundation, assessing 186 countries in the world.*

**Keywords:** competitiveness, economic freedom index, European integration, ranking, UE

**JEL Classification:** M21, O17, F50

## **1. Introduction**

One of the most important sources of data used to create the Index of the Economic Freedom is the Report by the World Economic Forum, where the authors present a ranking of countries on the basis of the Growth Competitiveness Index (GCI). It assesses the countries according to the business-friendly climate, from the most to the least friendly ones. The evaluation is carried out in 10 areas (The Global..., 2018, pp.317-325). Apart from the GCI indicator, the World Economic Forum also publishes the Business Competitiveness Index (BCI), taking into account the quality of the national business environment as well as business activities and strategies. The final classification is based on the weighted sum of the resultant and the factorial measurement indicators. Another source of data are the reports published by the International Institute for Management Development (IMD), entitled "World Competitiveness Yearbook". They assess the competitiveness of each country. The main criteria taken into account are as follows: economic growth, price level, public finances, fiscal policy, business efficiency and others. It also uses the ranking of attractiveness, i.e. the Global Services Location Index. It assesses the tendency of investors to locate business services in these countries. The index includes over 40 indicators that compare financial attractiveness, employee competencies and business environment. It also uses data from many other institutions from every country, such as statistical offices, particular ministries and the police. Due to the fact that the Economic Freedom Index for the final assessment uses data from the significant research centres, in my opinion, it can be considered as one of the best sources of

information on individual countries in terms of their competitiveness and creating conditions for the business area. The aim of the paper is to classify the 28 EU countries into individual groups and to characterize them against those countries in the world that create the best and the worst development conditions for their businesses. The article was developed on the basis of the latest report (data from 2018) published by The Heritage Foundation, assessing 186 countries and analyzing scientific articles addressing this issue.

The assessment of the competitiveness of enterprises from the point of view of their ability to engage in economic activities is very important both for the individual countries involved and for potential foreign investors. The literature assesses competitiveness at various angles, e.g. business services (Wyszkowska-Kuna, 2016), or the promotion of competitiveness through ICT (Zoroja, 2015); it can also be seen in terms of green environmental competitiveness (Kasztelan, 2016). Thus, the definition of the competitiveness itself (Voinescu 2015, Stankiewicz 2005, Olczyk 2008, Flak, Głód 2009) and the ways of measuring it (Misala 2011, Karol 2013, Borowski 2014) were presented in many scientific articles. In view of the limited volume framework of this article, they are not presented here in full. In general it can be said that the European Commission in its reports understands competitiveness as a "*sustainable increase in the standard of living in the country or region, at the lowest possible level of involuntary unemployment (...); with regard to industrial sectors - preservation and improvement of their position in the global market*" (Kotyński 2008).

From the point of view of global economies and companies already operating or wishing to operate, the ranking allows for:

- assessing, among others: normative acts (laws, regulations, recommendations) regarding business activities and comparing them with those in other countries,
- assessing their position over several years and thus assessing the direction of occurring changes,
- taking advantage of the experience and proven solutions of countries where the situation is better,
- making changes that will be beneficial for both the economy and the potential domestic and foreign investors.

### ***1.1 Economic Freedom Index - the Construction of the Index***

The Economic Freedom Index has been published annually (for over 24 years) by The Heritage Foundation. The latest one was published in February 2018. It examines the development of economic policies in 186 countries, which were classified according to 12 measures of economic freedom grouped in the main four categories, as follows (Miller 2018, pp.452-467):

- legal regulations (protection of property rights, judicial effectiveness, reliability of the government measured by the magnitude of corruption),
- government interventions (tax burden, government expenditure, budgetary deficit status),
- effectiveness of legal regulations (freedom to conduct business, employment, the stability and control of monetary policy),
- openness of the market (trade policy, foreign policy, financial policy).

The country's final result and its ranking is the average value of the twelve economic freedoms, but an important element in the construction of the indicator is that each of the twelve freedoms is attributed equal importance and is then drawn to the average.

The construction of the entire index (Karateev, 2017, Ott 2018) was developed on the basis of data published by all major global institutes and research centres such as the World Economic Forum, the World Bank, Eurostat data, International Monetary Fund, government publications of each country. Each of the 12 economic freedoms is assessed on the scale from 0 to 100, and so:

- for liberal economies (free) the economic freedom index is in the range of 80-100,
- for rather liberal economies (mostly free) the index is in the range of 70-79.9,
- for medium-liberal economies (moderately free) the index is between 60-69.9,
- for rather illiberal economies (mostly non-free) the index is between 50-59.9,
- for illiberal economies (repressed) the index is between 0-49.9.

However, in six countries (Iraq, Libya, Lichtenstein, Somalia, Syria, Yemen) an overall assessment was not made due to the unavailability of relevant statistics concerning all aspects of the economy (no precise data in several of the twelve areas). Obviously, it is difficult to talk about the competitiveness of the economies in the countries engaged in civil wars.

## **2. Economic Freedom in the Most and Least Competitive Economies**

Of all 186 countries, the group of the most liberal economies, and thus posing the world's best conditions for the development of economic operators, includes six countries, i.e. Hong Kong, Singapore, New Zealand, Switzerland, Australia and Ireland. Hong Kong is ranked the top place and its score is 90.2. It is considered the most liberal and at the same time the most competitive country all over the world, despite the fact, that only 10 years ago, the competitiveness of Hong Kong was questioned (Thompson 2004). There are 7.4 million people living in this country; the average economic growth over the past five years was 2.4%; unemployment remained at 3.4%, inflation at 2.6%, and GDP per capita was just over 58000 USD. It is worth noting that the public debt in relation to GDP was 0.1% and is thus more than 540 times lower than in Poland. Such good economic indicators are the result from multi-annual actions undertaken systematically by the government. Corruption is not tolerated in that country, the protection of private property rights is of great importance, also for businesses, providing them with appropriate conditions for development through the creation of among others, transparent rules for start-ups, as well as efficient judiciary to ensure swift enforcement of contracts and litigation. This, at the same time at low taxes (15% of natural persons and up to 16.5% of legal persons) allows for creating excellent conditions, which are reflected in high development of the country and thus its economy is the most competitive in the whole world (Miller, 2018, pp.214-215).

Singapore is ranked 2nd, which has about 1.8 million inhabitants less than Hong Kong, and its overall rating is 88.8. Like Hong Kong, it creates a stable political and legal environment that forms the basis for entrepreneurial development and competitiveness. The process of setting up a business is transparent and does not require equity. In 2015, Singapore was ranked 1st in terms of contract enforcement effectiveness. Such a policy influences the country's macroeconomic indicators. The average economic growth over the past five years was 3.3%, unemployment remained at a lower level as in Hong Kong (1.8%), while the GDP per capita was 29 thousand USD higher than in Hong Kong. Trade policy also plays an important role, as the total export and import value was 318% of GDP (Miller, 2018, pp. 27, 38, 368-369).

New Zealand is ranked 3rd by achieving a total rating of 84.2. There are 4 million people living in this country and unemployment is 5.2%. On the other hand, 2.9% of the average economic growth over the last five years is a reflection of the stability of the economy, where a strong emphasis is put on monetary policy, property rights, and the fight against corruption. In 2016,

New Zealand was ranked 1st in terms of the index of corruption, aiming to create a transparent, competitive and free-of-corruption public procurement system. Taxes in this country are twice as high as in Hong Kong, while public debt in relation to GDP is less than 30%, and thus the amount of tax is close to the value in EU countries, significantly deviating from Hong Kong and Singapore. Economic activity and business environment are the most competitive (indicator was 91.5) in the world thanks to the high flexibility of legal regulations and protection of property rights (the indicator was 95.1). The total value of trade policy in relation to GDP is almost six times lower than in Singapore. The main reason for this may be the amount of duty rates, where the average rate was 1.3%, while in Hong Kong and Singapore there were zero rates. (Miller, 2018, pp.27, 38, 314-315)

Switzerland is ranked 4th, being part of liberal economies, and achieving a comprehensive assessment of 81.7. The country is inhabited by 8.3 million people, GDP per capita was 59 thousand USD, and unemployment was 4.6%. The average economic growth was 1.4% over the last five years. A well-functioning system of institutional environment, including, above all, a lack of corruption (first place in the world), a fair judicial system, effectiveness of business rules, and also solving problems addressed to courts, all these result in high competitiveness of the economy and businesses operating there. Trade is important for the Swiss economy and the total value of exports and imports equals 114% of GDP, so it belongs to economies open to investment and trade, thus creating favorable conditions for business competitiveness. (Miller, 2018, pp.46, 392-393)

The fifth most liberal country in the world is Australia obtaining an overall assessment of 80.9. This country, compared with the four previous ones, is inhabited by the largest population of just over 24 million people. Australia is one of the richest countries of Asia and the Pacific. Australian legal environment (including business start-up rules) is relatively transparent and has a positive impact on the development of entrepreneurship. However, there are high tax rates in the country (maximum personal income tax rate is 45%, and corporate income tax rate is 30%), which also has an impact on trade (the total import and export value amounted to 40% of GDP). (Miller, 2018, pp. 27, 38, 84,85)

The last sixth country that creates the best conditions for business development is Ireland, which is the only one from EU countries in this range. The overall rate is slightly higher than the lower limit for this range (80.4), which allows for taking the sixth place in the world ranking. The result obtained here exceeds the regional average. Despite the relatively high public debt in relation to GDP (6.4%), this country is attractive for businesses primarily because of the lowest taxes (maximum tax rate for enterprises is 12.5%). Trade policy also plays an important role as the total export and import value is 217% of GDP. (Miller, 2018, pp. 46, 228-229)

The country that has obtained the lowest number of points in the world ranking and is regarded as a wholly illiberal economy is North Korea (with overall rating of 4.9) and thus occupies the 180th position in the world. This country is irredeemable and closed, maintaining an absolute regime and resistant to all economic reforms. There is no private property in this country, and everything is controlled by the government. The judicial authority does not exist, and corruption is commonplace. International trade and investments are also fully controlled by the government. (Miller, 2018, pp. 142-143).

Among the countries considered to be wholly illiberal (apart from North Korea) and thus considered to be non-competitive, there are 20 countries (ranked between 160th and 180th place in the world), achieving an overall assessment within the range between 40 and 49.9 points. These countries are, among others, as follows: Sudan, Chad, Angola, Algeria, Ecuador, Turkmenistan, Mozambique, Bolivia, Cuba, Venezuela and Zimbabwe. These are the

countries where legal regulations are ineffective (there is no transparency of rules), there is a high rate of corruption, no judicial independence, excessive bureaucracy is encountered and difficult access to external financing for business operators. These factors, combined with incoherent systems, hamper the development of entrepreneurship. The dictatorship and state control influence the inefficiency of economies and thus their competitiveness on the international stage.

### 3. Economic Freedom in EU Countries

The impact on the final assessment in the ranking of EU countries and thus the competitiveness of economic operators pursuing their business activities there, is related to the economic data of individual countries, which means among others: population, average economic growth over the last five years, public debt, unemployment and GDP per capita. In terms of population, Malta, Luxembourg, Cyprus and Estonia are the smallest, with a population of 0.4 to 1.3 million. In five countries (Latvia, Slovenia, Lithuania, Ireland) the population is between 2 and 5 million. In the next seven countries (Slovakia, Finland, Denmark, Bulgaria, Austria, Hungary and Sweden), the population is between 5 and 10 million people. 10 to 20 million people live in six countries: Portugal, Czech Republic, Greece, Belgium, the Netherlands and Romania. In the next range there are two countries: Poland and Spain (38 and 46.3 million people respectively). In Italy, France, and the United Kingdom there are between 60 and 67 million inhabitants. The largest population live in Germany - about 82.7 million people.

With regard to the next indicator of average economic growth (in percentage terms) over the last five years, there is a significant link between economic freedom and economic growth in EU countries. (Kacprzyk 2016). The highest growth was reported in Ireland - i.e. 8%, while Malta with 5.6% was ranked 2nd. In three countries (Lithuania, Romania and Luxembourg), there was also relatively high economic growth in the last five years, ranging from 3 to 3.3%. In the following six EU countries (UK, Sweden, Estonia, Slovakia, Poland, Latvia), the economic growth was from 2.1 to 2.7%. In the following five countries (Denmark, Germany, Czech Republic, Bulgaria, Hungary), the growth varied from 1.1 to 1.9%. In seven other countries (Croatia, Spain France, Austria, the Netherlands, Belgium), the growth was at a low level of 0.1-0.9%. In five other countries, however, it was negative, which means that the economies of these countries and their competitiveness compared to previous years have fallen. The largest decrease has been reported in Greece (-2.1% during the last five years), which among the EU countries located in the last place regarding the economic freedom index and has been recognized as a rather non-liberal economy, not aiming at the development of business. Other economic indicators in Greece were also at low levels. The country has also the highest unemployment rate (about 24%) and a poor state of public finances which is reflected by the public debt of slightly over 180% in relation to GDP. Negative economic growth over the last five years has been reported in Cyprus (-1.2%), in Italy (-0.6%), and also in Portugal (-0.2%), which has a direct impact on the state of public finances (public debt in relation to GDP was between 108 and 133%). Unemployment in these countries is approximately 11.5%.

An important measure is public debt (Law of 2009), which, as defined in the Public Finance Act, shows the total nominal debt of the public finance sector in the financial market (including banking). Public debt can be expressed in nominal values (the amount of total liabilities) or in relation to the value of gross domestic product. Consequently, its amount in relation to GDP is one of the measures used to assess the country's credibility on the international stage and thus has a significant impact on its competitiveness, trade, investments. It should be noted that in 2011, due to the European Commission's decision, the member states have been required to

report the amount of debt and public deficit according to standardized calculation method, which was aimed at reducing the impact of various fiscal procedures used to conceal them. The relatively high public debt related to GDP was observed in eight EU countries (Spain, France, UK, Croatia, Austria, Slovenia, Ireland, Hungary). In the following six countries (Germany, Finland, the Netherlands, Malta, Poland and Slovakia), the debt was 52-68%. Countries such as Sweden, Lithuania, Denmark, Romania, Czech Republic, Latvia have a relatively low public debt in relation to GDP (between 34-41%). The best public finance situation occurred in Bulgaria, Luxembourg and Estonia (respectively: 27.8%, 22.6%, 9.5%).

An important economic indicator reflecting the economic situation in the country concerned and thus its competitiveness is GDP per capita. Because it takes into account that GDP in its entirety does not reflect the actual situation of the economy, but GDP per capita is far more precise. In ten EU countries (Bulgaria, Romania, Croatia, Latvia, Greece, Hungary, Poland, Portugal, Estonia, Lithuania) GDP per capita was within 20-30 thousand USD, and so it was the lowest. For the seven countries (Slovakia, Slovenia, Czech Republic, Cyprus, Spain, Italy and Malta) it was between 31-39 thousand USD. In this respect, Finland, France, UK, Belgium, Denmark, Austria, Germany, Sweden, the Netherlands, with GDP per capita between 42 and 51 thousand USD are favorably placed. By far the highest GDP in relation to population occurred in Luxembourg (i.e. 104 thousand USD), which ranked 14th in the global ranking of economic freedoms, and in Ireland, which was found on the 6th place in the world (GDP per capita 69 thousand USD) and in the first place among the EU countries and as the only one has been included in very liberal economies and thus friendly and competitive for businesses and business environment.

From the point of view of the country's attractiveness in terms of economic activities, the freedom to conduct a business is primarily taken into account (by evaluating in this respect the transparency of legislation for companies) and employability of employees. The business freedom index in all EU countries was within 58-92.5%. Nine EU countries were in the lowest range between 58 and 69% (Croatia, Hungary, Slovakia, Malta, Bulgaria, Romania, Spain, Poland, Luxembourg). Countries such as Italy, Czech Republic, Lithuania, Greece, Austria, Estonia, Cyprus, Slovenia were within the limit of 70-79%. Very good and transparent business rules have occurred in Latvia, France, the Netherlands, Belgium, Ireland, Portugal, Germany, Sweden and Finland (the indicator between 80-90). The most business-friendly environment and the highest rate of freedom to conduct business have been observed in Denmark and the UK (respectively: 92.5%, 91.1%); in these countries it is also the easiest to find a suitably qualified workforce.

In view of the diversity of economies of the analyzed EU countries, a number of conclusions emerge from the table 1, and among the most important ones are:

- In the 2018 ranking, 12 EU countries were classified as rather liberal economies (mostly free); the overall score was between 70-79.9, and two of them (UK and Estonia) ranked the top ten in the world.
- The rather non-liberal economies include Greece, which has thus been in the last position among the EU countries. As the most liberal economy, Ireland was recognized as the only EU country to be in the highest range.
- Moderately liberal economies include 14 EU countries (range 60-69), Poland included.
- Having regard to the country's position in the world, there are three EU countries in the top ten: Ireland, Estonia and the United Kingdom.



**Table1: Economic Freedom Index - The Country's Overall Result and its Position in the World According to the 2018 Ranking**

Country	Overall score	Word rank	Country	Overall score	Word rank
80-100					
Ireland	80.4	6			
70-79.9					
Austria	71.8	32	Luxemburg	76.4	14
Czech Republic	74.2	24	Latvia	73.6	18
Denmark	76.6	12	Netherlands	76.2	17
Estonia	78.8	7	Germany	74.2	25
Finland	74.1	26	Sweden	76.3	15
Lithuania	75.3	19	United Kingdom	78.0	8
60-69.9					
Belgium	67.5	52	Poland	68.5	45
Bulgaria	68.3	47	Portugal	63.4	72
Cyprus	67.8	48	Romania	69.4	37
France	63.9	71	Slovakia	65.3	59
Spain	65.1	60	Hungary	66.7	55
Malta	68.5	46	Italy	62.5	79
Croatia	61.0	92	Slovenia	64.8	64
50-59.9					
Greece	57.3	115			

Source: Own study based on: T. Miller, A.B. Kim, J.M. Roberts, Index of Economic Freedom, Institute for economic Freedom, The Heritage Foundation 2018 pp.2

#### 4. Conclusion

The competitiveness of EU companies varies greatly and depends on the many factors assigned to each country in which they operate. These are geographical measures such as the country area, may not be able geographical location, soil type, and access to areas rich in natural resources. There are also economic measures such as GDP, public debt, economic growth, and the unemployment rate. Cultural ones, which are not measurable, but have an impact on the competitiveness of businesses, also play an important role. The construction of the Economic Freedom Index allows for the classification of countries from the point of view of their attractiveness in the business area, and therefore influences business competitiveness. According to the last ranking published in February 2018, Ireland is the most liberal economy and thus creates the best conditions for business development among the EU countries. It is ranked 6th in the world, earning a total of 80.4 points. Further research is needed in the area of competitiveness and its impact on companies operating in the EU.

#### References

- [1] Borowski K. (2014), Analiza fundamentalna. Metody wyceny przedsiębiorstwa, Difin, Warszawa.

- [2] Flak O, Głód G. (2009), *Konkurencyjność przedsiębiorstwa. Pojęcia, definicje, modele. Część 1*, Wyd. Akademii Ekonomicznej w Katowicach, Katowice s.38.
- [3] KarateevArtem Yu (2017), What and how does the index of economic freedom measure?, *University Journal Of Philosophy Sociology and Political Science*, Vol. 40 pp. 267-277.
- [4] Kacprzyk A. (2016), Economic freedom-growth nexus in European Union countries, *Applied Economics Letters* Volume: 23 pp. 494-497.
- [5] Karol T. (2013), *Nowe podejście do analizy wskaźnikowej w przedsiębiorstwie*, Wyd. Oficyna, Warszawa pp. 13-18.
- [6] Kasztelan A.(2016) , Green Competitiveness of the EU Countries, *Proceedings of the 3rd International Conference on European Integration 2016, Ostrava, Czech Republic* pp. 415-424.
- [7] Misala J. (2011), *Międzynarodowa konkurencyjność gospodarki narodowej: PWE*, Warszawa pp. 132-133.
- [8] Kotyński J. (2008), *Definicje i metody oceny zdolności konkurencyjnej gospodarki Narodowej oraz pomiaru i oceny konkurencyjności przedsiębiorstw [w:] Zmiany konkurencyjności polskiej gospodarki po uzyskaniu członkostwa w Unii Europejskiej: IBRKiK na zlecenie MRR: Warszawa.*
- [9] Miller T., Kim A.B., Roberts J.M (2018), *Index of Economic Freedom*, Institute for economic Freedom, The Heritage Foundation
- [10] Ott J. (2018), *Measuring Economic Freedom: Better Without Size of Government*, *Social Indicators Research*, Vol. 135 pp. 479-498.
- [11] Olczyk M. (2008), *Konkurencyjność. Teoria i praktyka*, CeDeWu, Warszawa 2008 pp.18.
- [12] Stankiewicz M.J. (2005), *Konkurencyjność przedsiębiorstwa. Budowanie konkurencyjności przedsiębiorstwa w warunkach globalizacji*, (Wyd. 2), TNOiK „Dom Organizatora”, Toruń pp. 36.
- [13] Thompson Er., (2004), *The political economy of national competitiveness: 'One country, two systems' and Hong Kong's diminished international business reputation*, *Review Of International Political Economy*, Vol. 11 pp. 62-97.
- [14] *The Global Competitiveness Report 2017-2018 (2017)*, World Economic Forum, pp. 317-325.
- [15] *Ustawa o finansach publicznych (DZ.U. 2009 NR 157 poz. 1240) z późn. zm.- Dział II.*
- [16] Wyszowska-Kuna J. (2016), *Competitiveness of The New European Union Member States In International Trade In Knowledge-intensive Business Services, Comparative economic research-central and eastern Europe*, vol. 19, pp. 5-26.
- [17] Zoroja J. (2015), *Fostering Competitiveness in European Countries with ICT: GCI Agenda*, *International Journal Of Engineering Business Management*, Vol. 7.
- [18] Voinescua R., Moisoia C. (2015), *Competitiveness, Theoretical and Policy Approaches. Towards a more competitive EU*, *Procedia Economics and Finance* pp. 512-5.

## **Business Service Centres and their Current Challenges in European Integration**

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### **Abstract**

*Since centralization and outsourcing of business services is a globally growing trend, this industry has enormous potential. Business Services Centres (BSC) is considered to be a model in the European Union that leads to improved performance and results achieved by the company. Within the framework of EU free trade, up to 70% of European centres state that standardization and process transformation is the first corner in deciding to set up the BSC. The aim of the article is the market evaluation of business service centres in the Slovak Republic and their impact on employment. The competitive advantage of Slovakia lies above all in economic and political stability, geographic location, skilled workforce and European currency. Thanks to positive business experiences in Slovakia, most investors remain and large numbers of them are expanding their activities. Based on the use of quantitative methods, we analyse secondary data on business service centres. Higher education graduates are often the main source of workforce for business service centres.*

**Keywords:** Business Process Outsourcing (BPO), Business Service Centre (BSC), employment EU free trade, Shared Service Centre (SSC)

**JEL Classification:** F23, M21, O31

### **1. Introduction**

Trade liberalisation within the European Union and globalisation of the world economy together with easier access to foreign markets leads companies to enhance the efficiency of their management activities and centralise the processes. This led in the 80s of the last century to the establishment of the first business service centres. The first business service centre outside its region was opened by IBM in India in 1998.

The business service centres (BSC) are defined as branches of foreign or domestic companies performing services for their mother and sister companies, and/or for third parties. Most commonly it concerns the area of finances, IT services, customer services, purchase, human resource support, sales and others (Skorková, Tarišková, 2017). Depending on who the client of BSC is, we distinguish the following BSCs:

- Shared service centres - they perform specific in-house processes and hereby provide support to mother and sister organisations.
- Centres of Business Process Outsourcing - these companies provide services in the field of company processes for third parties.

From the aspect of functioning, these two types are very similar - in both cases centralisation of the in-house processes takes place, aimed at their standardisation and increase of efficiency. The basic difference from the aspect of employees is that while in the shared service centres

each of the activities are directly performed by the employees of the given company, in centres for external service provision the employees perform these activities for their client - a third party.

Kislingerová (2008) defines the shared service centre as a special unit, an internal outsourcing centre, which takes over the joint activities from other branches, and/or companies within the group or region, with the aim to optimise and formalise the process of their solving. Andrišin (2015) sees the shared service centre as a specialised company branch that assumes and performs additional operating activities in order to achieve their standardisation, simplification, higher efficiency and lower costs.

According to Bergeron (2002) shared services is a collaborative strategy in which a subset of existing business functions are concentrated in a new, semiautonomous, business unit that has a management structure designed to promote; efficiency, value generation, cost savings and improved service for internal customers of the parent corporation, like a business competing in the open market.

Tammel (2017) points out the importance of the BSC in reducing the costs of the parent company and the affiliated companies. Since centralisation and outsourcing of corporate services is a globally growing trend, this sector has an enormous potential. Recently the model of these activities has been changing within the European Union. In the past, the main motive for providing such services was exclusively cost reduction. However, lately a new model has been formed leading to improved efficiency and results achieved by the company. Process standardisation and transformation take the first place when making a decision on opening a BSC. The cost reduction factor seems to come only on the second place.

Rothwell, Herbert, Seal (2011) joins BSC with professional employability and professional carriers. On an example, he says that companies are setting up a BSC among other things, where there are enough workers with professional qualification.

Maatman, Meijering (2017) shown that the consolidated dynamic capabilities of a BSC are also positively related to service value through improving its operational capabilities. Using of formal control mechanisms by the business units positively contributes to shared service value through their capacity to institute the use of informal control mechanisms.

Slusarczyk (2017) states the multitasking is also the characteristic feature of these centres- in the majority of entities the processes connected with more than one area are realised. It causes that the units that are located in the central Europe are able to provide services for their clients in a more complex manner.

Central Europe is European sub-region with a non-accurate demarcation geographical, and geopolitical. There is some construction historical affected the specific distribution of political power. Centre of Europe forms are logically buffer belt between the western and eastern parts of Europe, in the geographical context, between the West and the East in political and institutional terms. Also, the economic characteristics of the Central European countries were and are still some transition between the western prosperity and eastern poverty by mainly contrast in the performance of the economies, labour productivity, and qualification structure of the labour force. The Region of Central Europe is defined flexible depending not only on the geographical affiliation, but often they are rather historical reminiscences, institutional, political, and economic parameters connecting the different states of this part of Europe (Kučerová, 2016).

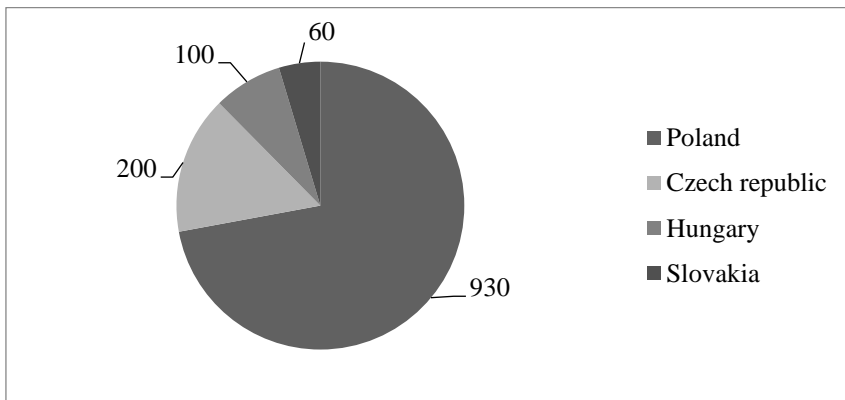
## 2. Problem Formulation and Methodology

The aim of the article is the market evaluation of business service centres in the Slovak Republic and their impact on employment. Based on using quantitative methods in the article, we analyse the secondary BSC data in Slovakia from the aspect of their number, structure, and number of employees. The secondary data was for 2016. At the end, we would like to draw attention to the benefits of BSC for the economy of the Slovak Republic.

## 3. Business Service Centres in Region V4

Among European countries, countries like Ireland, Poland, Czech Republic and Slovakia are attractive for BSCs. The Czech Republic is immediately after Poland the second biggest market for BSCs in the region of Central and Eastern Europe (Figure 1).

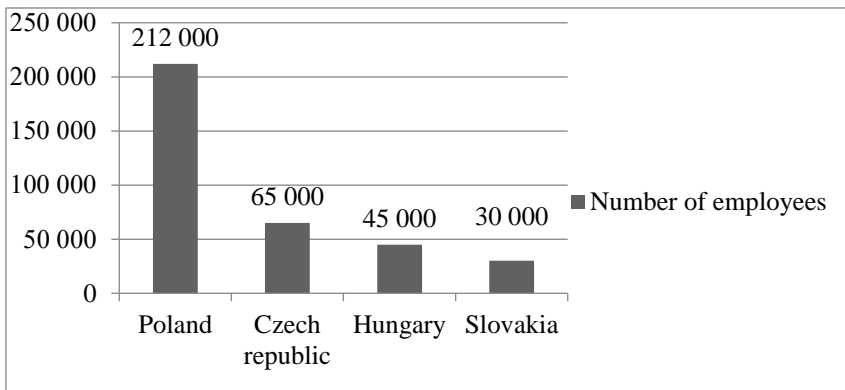
**Figure 1: BSC Number in V4 Countries in 2016**



Source: Grafton recruitment, own elaboration

The advantage of these countries is not only their geographical position but also concentration of educated and multilingual employees. Figure 2 shows the number of employees in BSCs in V4. The most centres with the highest number of employees were established in Poland, which may be related to the lowest wage costs.

**Figure 2: Number of Employees in BSC in V4 Countries in 2016**



Source: Grafton recruitment, own elaboration

Table 1 shows us the total costs of labour in a position with a salary of EUR 1,000. The best position from the V4 countries has Poland with salary cost only 22%. Second position belongs to Hungary with salary cost higher by 6.5 % than in Poland, follow Slovakia 33.0% and Czech Republic 34.0%.

**Table 1: Total Cost of Labour for Positions with a Salary of 1000€ in 2016**

Country	Salary cost in %	Cost of labour
<b>Poland</b>	22.0	1220
<b>Czech republic</b>	34.0	1340
<b>Hungary</b>	28.5	1285
<b>Slovakia</b>	33.0	1330

Source: own elaboration

V4 countries, which lie at the middle of Europe, have become the most attractive destinations for many business subjects thanks to its advantageous geographic location, foreign investment incentives and transport infrastructure. Language skills are a competitive advantage for all job seeker. Business services centres request candidates for job with various language combinations, English is considered a matter of course.

#### **4. Business Service Centres in Slovakia**

Nowadays multinational corporations already form an inseparable part of the Slovak economy. Apart from the direct impact on employment and GDP, foreign companies also indirectly develop the Slovak economy. A large number of small and medium enterprises are connected to these companies. Another positive externality is that foreign investors act as role models of business options in Slovakia for other companies from their home country. The competitive advantage of Slovakia consists mainly in economic and political stability, geographical location, qualified labour and common European currency.

An important part of foreign direct investments in Slovakia is represented by BSCs. They are branches of foreign or Slovak companies performing in-house services for their mothers and sister companies, or for third parties in different areas. The most common areas include finances, IT services, customer services, human resource support, purchase, sale and others. In the future, we can probably expect an increase in these activities, mainly in the field of cybersecurity, logistics, banking and insurance processes and others.

The majority of BSCs is based on young, educated and linguistically competent labour that Slovakia has owing to its 35 higher education establishments. As shown by survey conducted by the Grafton recruitment agency, the most wanted candidates are graduates from economic and language faculties, since the most of the job positions are part of providing support to the branches abroad.

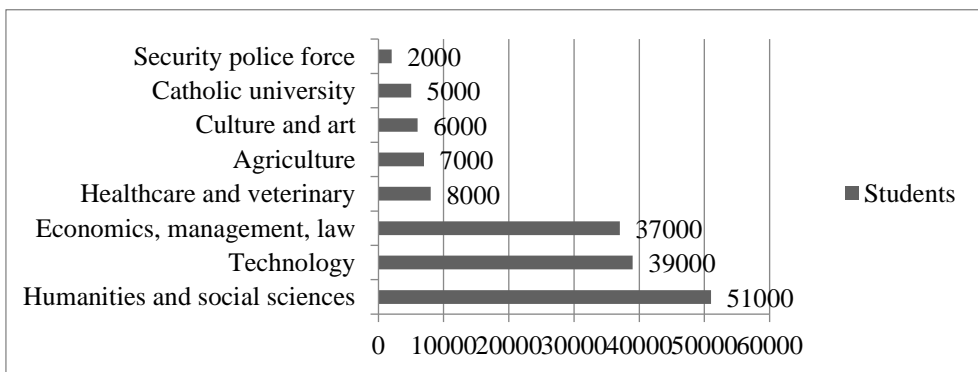
The wide network of higher education establishments in Slovakia is a part of the European area of higher education. We have 35 higher education establishments in Slovakia, out of that 20 public ones, 3 state ones and 12 private ones. Higher education establishments in Slovakia offer professional studies in the following areas:

- Economy, management and law
- Human and social sciences

- Technology
- Health care and veterinary education
- Agriculture
- Culture and art
- Catholic school
- Safety, policy force

Figure 3 shows the number of students according to field of study. The most students study human and social sciences, followed by technical education, economy, management, law, and others.

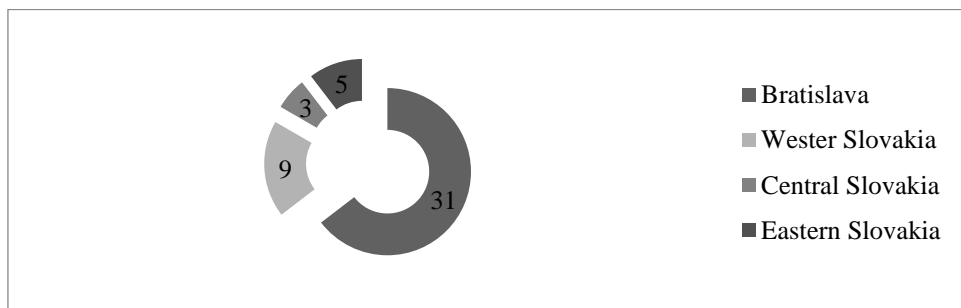
**Figure 3: Number of Students According to Field of Study in Slovak Republic in 2016**



Source: portalvs.sk

At the moment, BSC centres in Slovakia grow at a rate of 70% to 80% representing the growth of the already existing centres, and the remaining 20% represent newly established BSCs. More than 30,000 people are employed at business centres. The distribution of BSC market in Slovakia is not proportional (Figure 4) even if for the past few years the appetite of investors to establish their business centres also in other regions of Slovakia not only in the capital has been on the rise. 78% of all BSC employees work in Bratislava. There are only five BSCs in the Eastern Slovakia region but from the number of employees working there, it represents 17%. When compared with a study from 2014, the number of employees increased in the sector by 5,000 representing an approximate 10% year-to-year growth.

**Figure 4: Number of Business Service Centres in Regions of Slovakia in 2016**



Source: Grafton, own elaboration

Based on the survey conducted by the Business Service Centre Forum (BSCF), more than 71% of BSC employees have university education and more than 95% of them use English or German at work. Other languages, such as Italian, French, Spanish, Dutch, and Hungarian are also used. 90% of the BSC employees are citizens of the Slovak Republic, which is in contrast with the Czech Republic, where in some BSCs more than 60% of the employees are foreigners. The average age of employees is 33 years. From the gender perspective, the BSC sector has a balanced structure (48% women) and at the same time also enables women to hold managerial positions (40% are women), as well as find employment in technical fields. Flexible employment forms highly contribute to the balanced gender structure.

As presented by the results of the survey conducted by the Grafton recruitment agency, the wages at BSCs rank, depending on the region and the job position, from EUR 700 (specialist of telesales in Prešov) up to a BSC director from EUR 4,000 to EUR 10,000. Customer services have the highest share in the activities of the Slovak BSCs. In this field the salaries and wages rank from at least EUR 650 in Back Office specialist position in Žilina up to a maximum of EUR 1,200 in Bratislava. The salary in the Customer Operations Manager position starts from the minimum of EUR 1,500 in Žilina up to a maximum of EUR 3,200 in Bratislava. The average salary in BSCs achieves almost the double of the average salary in Slovakia.

BSCs are evidently very attractive not only for graduates, but also experienced workers, who would like to use their professional and language skills and acquire experience within an international environment. Grafton's survey shows that 68% job seekers speak English, up to 17% English and German, 8% of seekers speak English and French, 7% English and Spanish, 6% English and Italian, while 2% of the total number of seekers speak a combination of English and Russian. Except English an additional European language at fluent level is frequently expected by BSCs. The most desirable are German, French, Italian and Dutch. Up to 46% of job applicants speak at least one foreign language at level B2, with 18% achieving level B1 language skills, which is enough to manage in-house communication or instruction in English. However, it is quite alarming that there is data declaring that only 4% of candidates speak a foreign language at fluent level C2.

#### ***4.1 The Biggest Benefits of BSC for the Slovak Economy***

The Business Service Centres have significant advantages for the Slovak Economy. It increases stability and add value of the existing foreign investments. BSCs support of non-industrial economy with a higher added value. It brings increasing of professional employment in the regions. BSCs increase employment of young people, efficient re-qualification of graduates and continuous education of employees. BSCs represent an alternative to working abroad.

On the other hand, BSCs currently start to struggle with increasing unavailability of free workforce with suitable soft and hard skills, high quality language skills and different language combinations. The lack of suitable workforce is also related to the fluctuation of employees and with the problem to maintain them.



## 5. Conclusion

BSCs represent a significant part of the Slovak economy. The Slovak Republic supports the position of BSCs. Currently there are already two forms of aid that they can exploit, and that is investment aid and programmes for foreign investor support. One of the main reasons why BSCs come to Slovakia is the qualified workforce. With the increasing number of BSCs and the increasing competition in the region of Central and Eastern Europe, as well as on the global scale, it is necessary to ensure maintaining this competitive advantage and take appropriate measures. It is essential to align the labour market with the supply and contents of school subjects - to put emphasis on teaching business, digital and soft skills at all levels of the educational system. Working in Business Service Centres is very interesting due to specialization and language options. In the future, we can see how the number of centres in Slovak republic is changing and whether there is an increasing interest in working in these centres.

## References

- [1] Andrišin, P. (2015). Centrá zdieľaných služieb – čo ste o nich (možno) ešte nepočuli. *Zisk management*, vol. II, pp. 18-20
- [2] Bergeron, B. (2002). *Essentials of shared services*. New York: John Wiley & Sons.
- [3] Business Service Centre Forum (2017). [online]. [cit.2018-01-25]. Available at: [www.amcham.sk/download.pl?hash...ID=4819](http://www.amcham.sk/download.pl?hash...ID=4819).
- [4] Grafton (2017). *Business Services Centres-trends*. Available only in printed form upon request.
- [5] Kislíngrová, E. (2008). *Inovace nástrojů ekonomiky a management organizací*. Praha: C.H. Beck.
- [6] Kučerová, I. (2016). Europeanization of Central European Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU, Faculty of Economics. Pp. 526,536
- [7] Maatman, M., Meijering, J. (2017). Why Sharing is Synergy: The Role of Decentralized Control Mechanisms and Centralized HR Capabilities in Creating HR Shared Service Value. *Personnel Review*, vol. 46 iss.7, pp. 1297-1317.
- [8] Portál VŠ (2018). *Počet študentov podľa odborného zamerania* [online]. [cit.2018-01-10]. Available at: <https://www.portalvs.sk/sk/vysoka-skola/>.
- [9] Skorková, Z., Tarišková, N. (2017). Centrá podnikových služieb na Slovensku a ich súčasné výzvy. *Slovenská akadémia manažmentu*, vol. 5, pp.1-8.
- [10] Slusarczyk, B. (2017). Shared Service Centres in Central and Eastern Europe: The Example of Poland and Slovakia. *Economics and sociology*, vol. 10, pp. 46-58.
- [11] Rothwell, A.T., Herbert, I.P., Seal, W. (2011). Shared Service centres and Professional Employability. *Journal of Vocational Behaviour*, vol. 79, pp. 241-252.
- [12] Tammel, K. (2017). Shared Services and Cost Reduction Motive in the Public Sector. *International Journal in Public Administration*, vol. 40, pp. 9, pp. 792-804.

## **Financing the Pharmacy Activity from the Perspective of Admissibility of State Aid in the European Union**

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### **Abstract**

*State aid for enterprises is applied in the European Union as derogation from a rule of creating equal opportunities for starting and running a business in the Single European Market. The rules of State interventionism in the economy has been defined precisely in this field and they tend to seek a compromise between the position of the European Commission and the position of the Member State concerned with the admissibility of State aid. Economic activity consisting in running a community pharmacy is in Poland subject to strict regulation of the Act of 6 September 2001 on Pharmaceutical Law. With the aim of increasing the standard of pharmaceutical services in 2017 the legislator made significant changes in the rules of undertaking the above-mentioned activity. Pharmacy activity is most often carried out by enterprises classified into the group of small and medium-sized enterprises (SMEs). The subject of the article is to define a pharmacy as an SMEs group enterprises and to analyze available forms of State aid for this group of enterprises.*

**Keywords:** *competition policy, European Union, pharmacy activity, SMEs, State aid*

**JEL Classification:** *E62, K20, K32, K33*

### **1. Introduction**

State aid for enterprises is applied in the European Union as derogation from a rule of creating equal opportunities for starting and running a business in the Single European Market. The rules of state interventionism in the economy has been defined precisely in this field and they tend to seek a compromise between the position of the European Commission and the position of the Member State concerned with the admissibility of State aid. These rules, on the one hand, prohibit providing State aid so as not to lead to distortions of competition in the market of integrating countries, while on the other hand, they allow for providing the aid by public authorities in order to correct the imbalance in development between regions, stimulate or accelerate necessary changes and development of certain sectors of the economy.

From the economic point of view relating to State interventionism it ought to be noted that State aid can be a justified action mainly because of the social prosperity if free competition market mechanism does not bring satisfactory results (Mause and Gröteke, 2017). In this case, a well-planned State intervention may improve the allocation of production factors, reduce the irregularity in the market functioning and enable the achievement of common interest. The

major criterion for providing State aid should be rationality, which is the highest determinant of the admissibility of using the aid measures. It results from the fact that in a market economy the competition is essential for the proper functioning of the market and protecting the interests of its participants. State aid should not violate it unless its violation will be compensated by positive market phenomena that were caused by providing the aid (Nicolaidis, 2013). With the use of the aid instrument the State realizes the objectives that are considered a priority for socioeconomic development (Veebel, Ploom and Kulu, 2015).

In the provisions of EU competition law, the concept of an enterprise includes two elements, i.e. the subjective element (enterprise unit) and the objective element (conducting business activity). These elements make up the uniform, subject-object concept of the enterprise. A necessary condition, defining the concept of an enterprise in the context of EU state aid law is, therefore, to have legal capacity that allows for the performance of assets-disposing and liabilities-creating legal acts without which it is not possible to conduct business activity (Botta and Schwellnus, 2015). Economic activity consisting in running a community pharmacy is in Poland subject to strict regulation of the Act of 6 September 2001 on Pharmaceutical Law. With the aim of increasing the standard of pharmaceutical services in 2017 the legislator made significant changes in the rules of undertaking the above-mentioned activity, including limiting the catalogue of permissible forms of conducting it, excluding among others undertaking the pharmacy activity in the form of capital companies and binding it with the personal financial liability of the entrepreneur.

The aim of the article is to present the possibilities of financing the activities of pharmacies in Poland in the light of legislative changes concerning the principles of undertaking pharmacy activities from the perspective of the admissibility of State aid for the sector of small and medium-sized enterprises (SMEs) in the European Union.

### ***1.1 The Admissibility of State Aid in the European Union***

Legal regulation of the issue of State aid is an element of protection of the mechanism of competition, which has been recognized in the Treaty on the Functioning of the European Union (TFEU, OJ 2012 C 326/1) as one of the basic tools for the realization of the tasks assigned in it. The general prohibition of providing state aid has been formulated in Article 107 par. 1 TFEU, whereas this provision does not specify the definition of State aid, but indicates the criteria taken into account when assessing the specific actual circumstances. These criteria were formulated in the catalogues of terms defining State aid, i.e. the origin from the State or from State resources, selectivity, economic advantage to the beneficiary or beneficiaries of the aid and the disruption or threat to distort competition and affecting the trade between Member States. The primary objective pursued by the precise determination of the means which form State aid is not establishing an absolute prohibition on their use, but only a selection of the action circle which is subject to testing for their possible negative impact on competition in the Internal market level. Further study mostly comes down to the analysis if the binding specific provisions of the European law allow for providing State aid in the given case (Podsiadło, 2016).

The criterion for determining the prohibited aid is a public quality of the funds provided. The Court of Justice in its judgment on *Steinike & Weinlig* indicates that the concept of State resources contains the funds financed by the burdens imposed statutory, managed and distributed on the legally regulated basis, even if the administration of such funds is done by the private entities and separate from the structures of public administration (Case: 78-76). Also, the forms which involve increasing the benefits can be optional, as they depend on the rules applicable in the Member States. Treaties and secondary legislation do not contain the

catalogue or examples of forms of aid, limiting itself merely to stating that the form can be optional (Case: 234/84, para 13). It results from the broad definition of State organs that may provide State aid, as well as the overall concept of aid that has been defined by definitional conditions in Article 107 par. 1 of the Treaty. This implies that the provisions of Article 107 TFEU involve a variety of direct financial transfers from the public authorities. These include grants and increasing the company's capital (Cases: 296 and 318/82), interest-free loans (Case: T-214/95), loans given on preferential interest terms (Cases: C-15/98 and C 105/99), or without adequate security (Case: C-457/00) and extra payments to the loans or credit interest (Case: C-114/00). It's also a sale of goods for a given enterprise at a reduced price (Case: 40-75, para 2;), the return of the part cost of purchased goods or services (Case: C-100/92, para 13) and extra payment to the premiums for social security plan created under the program of collective redundancies (Case: C-241/94) implemented by the enterprise. Interpretation of Article 107 TFEU also applies to aid measures taking the form of indirect financial transfers, among which one can indicate the resignation of public claims (Case: T-217/02, para 169) and exemption from the duty of paying the fines or other financial penalties (Case: C-200/97, para 43), the postponement of the claims payment term (Case: T-46/97), as well as informal tolerance of persistent state of not paying the taxes, fees and other receivables (Case: C-415/03). State aid may also include the state guarantees and various other protections of credits or loans payment in the situation where they allow the enterprise to obtain favourable interest rates compared to the currently adopted (Case: C-404/97, paras 47-48), and in the situation when the loan would not at all have been provided without presenting the appropriate guarantees from the public authorities (Case: C-288/96). Considered as State aid are often tax exemption or reduced tax rate (Case: C-172/03), as well as tax deductions (Case: C-6/97), reduction of the tax base (Cases: T-346/99, T-347/99 and T-348/99), reduction in employers' contributions to social security (Case: C-251/97), as well as the postponement of tax payment (Case: C-256/97) and causing a similar effect the special depreciation allowances (Case: C-408/04 P). Furthermore, the aid can be a system in which the taxable profit of the enterprise is flat-rate defined as a percentage of the entire amount of operating expenses and costs, excluding the personnel costs and financial costs (cost plus method) (Cases: C-182/03 and C-217/03, paras 90-102). The aid may also include the provision of goods or services below the market value or on preferential terms, including for example the sale of land (Case: T-274/01), the supply of electricity at a preferential tariff for selected enterprises (Case: C-56/93, para 10) providing logistical and commercial support (Cases: C-341/06 P and C-342/06 P), provision of intangible assets of economic value without mutual consideration (e.g. providing a list of clients) (Case: T-613/97, paras 164-171), or concluding agreements on mutual provisions between public and private enterprises under the terms of the economic benefit to a private enterprise (Case: T-158/99, para 107). In certain circumstances the prohibition of providing State aid formed by the Treaty will apply to the payments for public services (Case: C-280/00, paras 87-95). This will apply to the purchase of services, which are not in fact necessary and required (Case: T-14/96).

State aid according to Article 107 par. 1 TFEU brings an economic advantage for certain enterprises or productions of certain goods, excluding the others. In other words, the given measure cannot be regarded as State aid, if it does not bring any benefits to the addressed entity (Milhet, 2017). State aid may therefore be described as selective increment of financial benefits to an enterprise or a group of enterprises, which at the same time is accompanied by formation of a financial burden on the side of public finances. This burden may be in the form of public spending to enterprises or reducing the regulatory burdens imposed on the enterprises. In the first case it will be the aid provided by the active support mechanisms, such as grants, interest rate subsidies on bank credits, refunds, preferential and conditionally discharged loans, sureties and credit guarantees. In the second case it will be the aid provided by the exemption and

remission of tax (tax subsidies), the conversion of enterprise debt to a capital, or postponing the payment of specific public contributions.

Therefore, it should be emphasized that the measures of State intervention classified as State aid within the meaning of Article 107 par. 1 TFEU are not only of the subsidy character, because beside direct transfers of payments they also include indirect measures (Micheau, 2015). The aid may result from normative act, which will provide a legal basis for providing the aid, thus accepting the form of the aid program directed to all that fulfil the specified conditions of enterprises. The aid may be provided on the basis of an administrative decision, which takes place in relation to exemptions from taxation, reduction of taxes and other preferences in compulsory charges of public law resting on enterprises (Nicolaidis, 2015). Furthermore, the basis for providing the aid by public authorities can be civil law contract, which is used for example in the case of grant, preferential credit and preferential loan or guarantee. The State aid may take the form of taking up shares or stocks in commercial enterprises, carrying out public procurement on preferential terms, and also it can occur in connection with the execution of contract for public-private partnerships and purchase-sale transactions. This last form takes place in a situation of selling goods by the state at a reduced price, the purchase by the enterprise of land or buildings on preferential terms, or the purchase of goods or services from the enterprise at prices lower than market prices.

## **2. Problem Formulation and Methodology**

The subject of this article is the analysis of the State aid law in the light of statutory changes in conducting pharmacy activities in Poland made in 2017. The considerations are included in the context of the admissibility and rules for granting State aid for small and medium-sized enterprises in the European Union, taking into account the specific nature of the pharmacy activities as a public health protection facility, justifying the increased interference of the State in shaping the market of pharmaceutical services and the principles of conducting pharmacy activities. The article uses the method of legal regulation analysis and method of description.

## **3. Problem Solution**

Determining the perspective of State aid in the context of pharmacy operations is justified by the subjective structure of the operation of the pharmacy as a small or medium-sized enterprise, and therefore within the framework of the qualification of the above-mentioned aid. The legal basis for the admissibility of State aid in order to promote the increase of competitiveness of small and medium-sized enterprises is art. 107 para. 3 lit. c) TFEU. According to this provision, aid is allowed to facilitate the development of certain activities, provided that it does not affect competition in the internal market and does not change the conditions for trade between Member States. State aid for small and medium-sized enterprises fulfils the conditions for the application of this exemption from the Treaty prohibition of granting State aid, as this sector plays an important role in the economy of the country. It is a source of income for the State budget and budgets of local governments, has a significant impact on GDP, creates new jobs and contributes to the creation of social and functional changes in individual regions.

### **3.1 Legal Framework for Undertaking Pharmacy Activities in Poland**

Conducting economic activity in Poland in the frame of an enterprise as a generally accessible pharmacy is a subject to the regulation of the Pharmaceutical Law of 6 September 2001 (consolidated text JoL of 2017, item 2211, hereinafter: a.p.l. or Pharmaceutical Law). This activity is characterized by the duality of the goals pursued, i.e. primary public goal and minor in its context economic goal. According to art. 86 para. 1 a.p.l. *the pharmacy is a public health protection facility in which the authorized persons provide in particular pharmaceutical services*. The basic scope of pharmaceutical services provided in a pharmacy includes: 1) the issuance of medicinal products and medical devices, specified in separate regulations; 2) preparing magistral drugs, within no more than 48 hours from submitting the prescription by the patient and in the case of prescription for magistral drugs containing narcotic drugs or labelled "to be issued immediately" - within 4 hours; 3) preparation of pharmacy drugs; 4) providing information on medicinal products and medical devices. In addition, pursuant to art. 86 para. 8 a.p.l. in generally accessible pharmacies, it is possible to sell on separate stands products specified by law, possessing the required approvals or permits, provided that their storage and sale will not interfere with the basic activities of the pharmacy. The subject of the pharmacy activities described in the above manner may overlap in a certain scope with the commercial activity of the enterprise which is not a pharmacy. According to art. 71 para. 1 a.p.l., *except for pharmacies and pharmaceutical points, retail sale of medicinal products issued without a doctor's prescription, excluding veterinary medicinal products, may be carried out by: 1) herbal medical stores, 2) specialized medical supply stores, 3) general stores – hereinafter referred to as "non-pharmacy trading facilities"*. The indicated subjective differentiation is of particular importance, as the enterprise selling medicinal products, which is a non-pharmacy trading facility, realizes a specific range of services competitive to the pharmacy activity, but not being in principle limited by a wide range of restrictions applicable to the pharmacy activities as a public health protection facility. Exceptions should include solutions limiting the freedom of economic activity of both pharmacies and non-pharmacy trading facilities, an example of which is a ban formulated pursuant to art. 94a para. 1 and para.1a, a.p.l. on the advertising of pharmacies, pharmacy points and within a certain scope also non-pharmacy trading facilities. According to its content, it is forbidden to advertise pharmacies and pharmacy points and their activities, as well as it is forbidden to advertise non-pharmacy trading facilities and their activities, whereas in the case of non-pharmacy trading facilities, only advertising which refers to medicinal products or medical devices is prohibited. In the remaining scope, advertising of non-pharmacy trading facilities and their activities is allowed, subject to separate regulations limiting advertising in other sales areas (e.g. alcohol). The comparative approach to the activities of pharmacy and non-pharmacy trading facility, in the context of the subject scope of their activities, is justified only in a normatively defined, common level of retail trade of specific medicinal products. However, assuming the analysis of subjective conditions, the above list raises important conclusions, in particular in light of changes in the Pharmaceutical Law made in 2017.

Recognizing the special nature of pharmacy activity, expressed in the undisputed primacy of the implementation of public health protection as a public goal of pharmacy activity, it is impossible to depart from perceiving a pharmacy as an enterprise pursuing specific economic assumptions, whose subsidiarity is only apparent. Considering that every community pharmacy is an enterprise functioning as an entity subject to market conditions, achieving the economic goal understood as economizing of pharmacy activities towards generating profit remains the basic factor shaping the economic ability to implement a primary goal by the pharmacy, i.e. public health protection. Due to the priority given to the objective of public health protection, as well as due to the essential connection of pharmacy services with the

profession of pharmacist as a profession of public trust, pharmacy activity is regulated by acts of state authority at every stage of its implementation. Both taking up pharmacy activities and its operation were subject under the provisions of the Pharmaceutical Law to the decisions as well as the supervision and control of the authorities of the State Pharmaceutical Inspection. Having the above in mind, the subject of a particular analysis should be made of all the conditions determining the right to undertake pharmacy activities, determining the categories of sources of its financing and the property liability of the entrepreneur.

The Polish market of pharmacy services underwent significant subject polarization in 2017. With the aim of ensuring the highest standard for the provision of pharmaceutical services, the legislator amended Pharmaceutical Law in a way differentiating the legal and economic position of entrepreneurs that ran a pharmacy or at least applied for a permission to run it before the act came into force, and for entrepreneurs that made the above application after the change of regulation. The legal basis for the change is the Act of 7 April 2017 amending the Pharmaceutical Law Act (consolidated text JoL of 2017, item 1015, hereinafter: the amending Act), the provisions of which entered into force on June 25 2017. The scope of changes included, in particular, the principles of undertaking pharmacy activities by introducing, among others, the previously non-binding coefficients: demographic and geographical, determining the localization structure of pharmacies. In accordance with the current content of art. 99 para. 3b a.p.l. permission to run pharmacies *is issued if, as of the date of submission of the application for a permit, the number of residents in a given commune, calculated per one community pharmacy, is at least 3,000 people and the distance from the planned location of the pharmacy to the nearest community pharmacy, counted between entries to the dispatch centres of pharmacies in a straight line, is at least 500 meters.* According to art. 99 para. 3d point 1 a.p.l., the indicated demographic coefficient is not taken into account if, *as at the date of submitting the application for the permit, the distance from the place of the planned location of the pharmacy to the nearest community pharmacy, counted between the entries to the dispatch centres of pharmacies in a straight line is at least 1000 meters.* Limiting the scope of the analysis to strictly subjective changes, it should be pointed out that pursuant to art. 99 para. 1 a.p.l. in the current wording (i.e. in force prior to the amendment of the Act), the right to obtain a permission for running a pharmacy was held by a natural person, a legal person and a commercial law company without legal personality. Therefore, the entity authorized to obtain a permission was an entrepreneur conducting economic activity: 1) as part of an individual economic activity, 2) in the form of a limited company, i.e. limited liability company or joint-stock company, 3) in a form without legal personality but having a legal subject of a commercial law company, i.e. a general partnership, limited partnership, limited joint-stock partnership and a limited liability partnership (Kondrat, Masełbas, Stefańczyk-Kaczmarzyk, and Zieliński, 2016). The legislator did not, therefore, restrict the forms of economic activity proper for running a pharmacy, as well as did not condition taking up the activity with the applicant's right to practice as a pharmacist. Perceiving the activity of the pharmacy as a complex economic activity, conducting it by an entity with specific business competences was assessed as complementary to the statutory requirement of employment as a pharmacy manager (having at least a 5-year work experience in a pharmacy or a 3-year work experience in a pharmacy, if they have a specialization in the field of retail pharmacy), what was seen as a guarantee of proper provision of pharmaceutical services. The above conviction corresponded with the view expressed in the Constitutional Tribunal jurisdiction, according to which *"from the very fact that someone may be subject to rights and obligations resulting from economic activity in the form of running a pharmacy, it cannot be concluded that without having specialist knowledge it is dangerous for legally protected goods. Such a danger may result only from factual acts, and these are strictly regulated and reserved for persons with appropriate qualifications in the field of running a pharmacy"* (Constitutional Tribunal,

Judgement of 20/08/1992, Ref. K4/92, OTK 1986-1995/t3/1992/cz2/22). The above liberal concept at the base of shaping the pharmaceutical market, and thus the pharmaceutical services market in Poland, met with criticism expressed in the justification of the draft law amending Pharmaceutical Law, according to which *"current experience of highly developed countries indicates that the proper functioning of pharmacies and carrying out their tasks cannot be accomplished by fully liberalizing the rules for their creation. Only the pharmacist, as the owner of the pharmacy, can guarantee that the basic objective of the pharmacy activities will be properly implemented. A close relationship of an independent pharmacist with a pharmacy run strengthens the pharmacist sense of responsibility, strengthens the necessary relationship of trust to representatives of other medical professions and patient, and guarantees optimal supply of medicinal products"* (Rationale for the parliamentary draft amendment to the Pharmaceutical Law Act). As a consequence, the legislator decided to fundamentally change the subjective requirements for obtaining a license to operate a pharmacy, which is expressed in the current wording of art. 99 para. 4 a.p.l., according to which the right to receive a permit to run a community pharmacy is obtained by: 1) a pharmacist with the right to practice conducting individual economic activity; or 2) a general partnership or a limited liability partnership whose subject of activity is only to run pharmacies and in which associates (partners) are only pharmacists with the right to practice. Considering that according to art. 2 para. 1 of the amending Act, the provisions of Pharmaceutical Law, as amended, apply only to proceedings for permits to operate pharmacies initiated after the amendment to the Act came into force, the structure of the pharmaceutical market in Poland may be significantly divided into entrepreneurs operating under the existing rules, including economically advantageous forms of activity (in particular within limited companies) and entrepreneurs subject to the restrictions of freedom of economic activity. The particular importance in the context of the indicated polarization should be given to a limitation of the forms of conducted pharmacy activity to: 1) individual economic activity, 2) general partnership and 3) limited liability partnership. The indicated restriction should be perceived in two ways, i.e. both as 1) resulting in the exclusion of activities form that reduce the financial liability of the entrepreneur and shape the protection of their personal property and as 2) excluding specific sources of financing economic activity. Each of the currently accepted forms of undertaking pharmacy activities in the scope of newly-opened pharmacies combines responsibility for obligations resulting from the conducted activity with the possibility of execution concerning the entrepreneur personal property. In the case of running a pharmacy in the form of a one-person (individual) economic activity, the entrepreneur is responsible for the obligations undertaken with all their assets without any restrictions and regardless of the moment of acquiring the components of this property. Conducting pharmacy activity in the form of a general partnership or a limited liability partnership also finds reference to the sphere of personal property. According to art. 22 § 2 and art. 31 of the Act of 15 September 2000, the Commercial Companies Code (consolidated text JoL of 2017, item 1577, hereinafter: CCC), each partner of a general partnership is liable for the company obligations without limitation with all their assets jointly and severally with other partners and with the company, provided that this liability is of a subsidiary nature, which means that the creditor of the company can only execute the property of the partner if the execution of the company assets proves to be ineffective. A similar relationship in property relations of an entrepreneur running a pharmacy with respect to third parties occurs in the case of a limited liability partnership, i.e. created by partners for the purpose of free profession (pharmacist) in a company running an enterprise under its own name, to which (in accordance with art. 89 of the CCC) the above rules on property liability applicable to a general partnership, provided that (in accordance with art. 95 § 1 of the CCC) a partner in a limited liability partnership is not liable for company obligations arising in connection with pursuing a liberal profession by other partners in the company, as well as



obligations of the company as a result of actions or omissions of persons employed by the company under a contract of employment or other legal relationship, which were subject to the management of another partner in the provision of services related to the subject of the company activities. As a consequence, the responsibility for the limited liability partnership obligations can be divided into: 1) obligations related to the organization and operation of the company – for which each partner responds with all their assets in a subsidiary way jointly and severally with the other partners and the company; 2) obligations related to the performance of a free profession by a given partner or resulting from actions or omissions of subordinates – for which only this partner is subsidiary, jointly and severally responsible. The indicated limitation of the forms of undertaking pharmacy activities eventually affects a significant limitation of the financing sources of this activity. The exclusion of undertaking pharmacy activities in the form of limited companies and a limited partnership eliminates the possibility to raise capital by taking up shares or stocks in a limited company on a monetary or non-monetary basis, and making such contributions by the investor as a limited partner in a limited partnership. An entrepreneur undertaking pharmacy activities after the entry into force of the amendment of the Pharmaceutical Law remains, in principle, limited to the use of own sources of financing or the offer of services of an external financing institution. The justification for the above solution should be seen primarily in the legislator efforts to eliminate the influence of any non-pharmacists on the functioning of the pharmacy, with particular emphasis on protecting the public interest. Recognizing in principle the direction of the changes chosen as accurate, surprising, however, may be to exclude a limited partnership from the scope of permissible forms of undertaking the pharmacy activity. The activity in the form of a limited partnership is characterized by the special position of a partner with the status of a limited partner, thus realizing primarily the function of a "passive investor" (Kidyba, 2016). An associate who is a limited partner has a very limited influence on managing the company affairs, consisting mainly in granting permits to activities exceeding the scope of ordinary management and in certain control rights expressing primarily by the right to request a copy of the financial statements for the financial year and reviewing the books and documents to check its reliability. It seems, therefore, that a limited partnership is a form of activity which, on the one hand, is not subject to the interference of an investor (as a limited partner) in running a company, management rights belong in fact to an active partner called a general partner. On the other hand, a limited partnership allows for the acquisition of an external investor whose asset contribution could provide or secure sources of funding for pharmacy operations in a significant way. It is to be noted only on the side of the above comments that, for example, in accordance with art. 4a para. 1 point 3 of the Act of May 26, 1982, the Law on Advocates (uniform text JoL of 2017, item 2368, as amended), practising the profession of advocate may take place, among others, in the form of a limited partnership, provided that *the general partners are advocates, legal advisers, patent attorneys, tax advisors or foreign lawyers performing a permanent practice on the basis of the provisions of the Act of 5 July 2002 on the legal assistance provided by foreign lawyers in the Republic of Poland*. Therefore, it cannot be reasonably argued that the form of a limited partnership does not guarantee an adequate standard of performance of the profession of public trust.

Considering the indicated diversification of admissible forms of pharmaceutical activity, which constitute an important contribution to the diversification of the competitive factor of the pharmacy services market in Poland, as well as taking into account conducting in a certain scope of trade in medicinal products by non-pharmacy trading facilities, the identification of the widest possible spectrum financing of pharmacy activities, including the perspective of the EU state aid law should be considered a particularly important issue. The above issue is the more important that regardless of the moment of undertaking pharmacy activity and the related economic limitations, the pharmacy activity should, by its very nature, always remain focused

on realizing the public goal, understood as protection of public health, and creating a framework for effective, economic security of conducting this activity is an indispensable condition for achieving this goal.

### ***3.2 Small and Medium-Sized Enterprise as a Beneficiary of State Aid***

Small and medium-sized enterprises play a critical role in the EU development strategy for economic growth and social welfare (Bacon, 2009). The European Commission sees SMEs as crucial for the development of the internal market, because SMEs are regarded as important for the development of jobs and encouraging an entrepreneurial drive throughout the European Union (Florio, Vallino and Vignetti, 2017). The promotion and nurturing of SMEs allows new and smaller businesses to be created, develop and grow, which increases the pool of competitors (Vasin and Gamidullaeva, 2015). Better competition drives down consumer prices, increases innovation and efficiency and adds to the long term stability of the EU. But SMEs usually have difficulties obtaining and securing capital for all types of expenditures. This is due to financial institutions being unwilling to accept the risk against the limited guarantees that SMEs are able to provide. In addition, due to their size SMEs will have limited access to certain types of information, such as new technology and new markets.

Small and medium-sized enterprises are specified as including any entity engaged in an economic activity, irrespective of its legal form, including self-employed persons and family businesses, and partnerships or associations regularly engaged in an economic activity (Kekelekis, 2008). The category of SMEs is sub-divided in three classifications. The category of micro, small and medium-sized enterprises is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding €50 million and/or an annual balance sheet total not exceeding €43 million. Within the SMEs category, a small enterprise is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed €10 million, and a micro-enterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed €2 million. SME must be autonomous. An autonomous SME is any enterprise which is not classified as a partner enterprise or as a linked enterprise.

In line with the strategic importance of SMEs, the Commission has consistently taken a favourable approach to aid to encourage the development and sustainability of SMEs. In other words, the particular interests of SMEs entitle the Commission to afford them special consideration, whilst noting that the Commission need not approve systematically all schemes giving special and preferential treatment to such enterprises. On the basis of its experience in assessing aid to SMEs, the Commission issued guidelines on the compatibility with the common market of investment and start-up aid in 1992 (OJ 1992 C 213/2), which were revised and extended in 1996 (OJ 1996 C 213/4). Council Regulations No. 1588/2015 (OJ 2015 L 248/1) - earlier Council Regulations No. 994/98 (OJ 1998 L 142/1) - now provides for the Commission to adopt regulations declaring certain aid for SMEs to be compatible with the internal market and not to be subject to the notification requirements of Article 108 par. 3 TFEU. On the basis of this power the Commission adopted a block exemption for certain types of State aid to SMEs, i.e. Regulation (EC) No. 70/2001 on aid to SMEs (OJ 2001 L 10/33) and first general block exemption regulation (GBER), i.e. Regulation (EC) No. 800/2008 (OJ 2008 L 214/3), which contained specific provisions concerning SMEs in relation to investment and employment aid, regional start-up aid for small enterprises, aid for small enterprises created by female entrepreneurs, aid for consultancy and for participation in fairs and aid in the form of risk capital, as well as preferential provisions concerning aspects of environmental

protection and research and development. This has now been superseded by the new general block exemption in Commission Regulation No. 651/2014 (OJ 2014 L 187/1). SMEs are also afforded preferential consideration under many other European Union State aid policies, such as regional aid, employment aid, training aid, aid for research, development and innovation, and aid for environmental protection.

The GBER, together with the Commission's general rules for the approval of aid measures, establishes the following methodology for the assessment of aid for SMEs.

Firstly, a number of SMEs support measures do not constitute State aid. For State aid to arise, all of the criteria under Article 107 par. 1 TFEU must be met. In most cases involving aid to SMEs, it will be straightforward to establish the existence of aid within Article 107 par. 1. The doubtful cases are likely to be those where the nature of the SMEs business makes it questionable whether the aid would affect trade between Member States, and cases of *de minimis* aids. The criterion of effect on inter-state trade may well not be satisfied where aid is granted to enterprise in relation to products or services which by their nature are not traded between Member States. This may well be the case for SMEs, particularly micro enterprises, providing local services for example. Aid to SMEs may also fall within the scope of the *de minimis* block exemptions, i.e. Commission's Regulation No. 1998/2006 (OJ 2006 L 379/5), which was replaced by Regulation No. 1407/2013 (OJ 2013 L 352/1). In such cases, the aid is deemed not to meet the criteria of Article 107 par. 1 TFEU and does not need to be notified under Article 108 par. 3 TFEU. *De minimis* aid may be granted up to a ceiling of €200,000 per enterprise, over any period of three years, or €100,000 per enterprise in the road transport sector. The aid must also be "transparent", such that it is possible to calculate precisely the gross grant equivalent of the aid ex ante without need to enterprise a risk assessment.

Secondly, where there is aid, the GBER enables aid to SMEs that complies with certain substantive and transparency requirements to be implemented without prior notification and approval. The GBER contains exemptions of categories of SME aid that are similar to the exemptions in the SME block exemption, i.e. investment aid and aid for the participation in fairs (Podsiadło, 2014). In addition the GBER covers a number of new categories of aid to SMEs, such as aid for consultancy in favour of SMEs, aid for cooperation costs incurred by SMEs participating in European Territorial Cooperation projects, risk finance aid, aid for start-ups, aid to alternative trading platforms specialised in SMEs, aid for scouting costs (Nicolaidis, 2014). SMEs also generally benefit for more favourable treatment under other GBER exemptions for horizontal aid and regional aid.

Thirdly, SME aid measures not eligible under the GBER may still be individually approved by the Commission under Article 107 par. 2 and par. 3 TFEU. Of these, the main provision under which State aid for SMEs is likely to be approved is Article 107 par. 3 point c. In addition, some forms of aid to SMEs may fall under the derogation in Article 107 par. 3 point d for aid to promote culture and heritage conservation, or the categories in Article 107 par. 2 of aids which are always exempted such as social aids and disaster aid.

Taking the above into account, the aid addressed to small and medium-sized enterprises conducting pharmacy activities may be – in addition to the above-mentioned specific objectives of granting such aid – primarily *de minimis* aid, which does not constitute aid subject to the prohibition in art. 107 para. 1 TFEU. This aid does not have to meet the requirements set out in the relevant provisions regulating the terms of admissibility of State aid, because if the conditions set out in Commission Regulation No. 1998/2006 are met, *de minimis* aid is not a State aid in the light of EU competition law. This principle has been preserved in the new Commission Regulation No. 1407/2013. This means that this type of aid does not have to be one of the exceptions to the general prohibition of granting aid and can take forms that the

European Commission is not very favourable to. This is mainly about operational aid, which is granted in connection with the current activities of the enterprise (Nicolini, Scarpa and Valbonesi, 2017). This may be aid for an enterprise operating in an area not eligible for regional aid or aid allowing to finance expenses that are not eligible for regional aid, such as interest on loans, insurance and leasing margins. However, it should be taken into account that, unlike any other aid, *de minimis* aid is cumulated both for the project and the beneficiary. If *de minimis* aid and aid subject to a Treaty prohibition on the basis of a specific exception (regional aid, horizontal aid, sectoral aid) are granted for the implementation of a given investment project, this leads to a situation in which both these aids if they concern the same eligible expenses, may not exceed the maximum intensity of State aid appropriate for a given project (De Cecco, 2013). In addition, the *de minimis* aid granted is cumulated with other *de minimis* aid granted three years back, even if this aid was granted for other projects and other eligible expenses.

#### 4. Conclusion

The reform of the State aid system in the European Union results in the simplification and rationalization of State aid rules in general block exemption regulations (GBER, New GBER), thanks to which Member States are now able to introduce a wide range of support measures for small and medium-sized enterprises with a minimum administrative burden. The GBER regulations set a framework that allows Member States to grant aid targeted at creating jobs, improving competitiveness and improving the environment without having to contact the European Commission. The measures specified in the GBER and meeting the conditions and criteria they contain are exempt from the notification requirement. However, due to the high risk of distortion of competition, the Commission assesses a large part of the aid in each individual case in order to examine its effect on competition and the contribution to the common interest. State aid granted as part of block exemptions is also *de minimis* aid (so-called soft aid), under which the threshold of admissible aid, which does not require notification, has been defined. Aid provided on the basis of regulations of the European Commission in this respect is admissible by virtue of law, and therefore exempted from the obligation to notify provided that all conditions contained therein are met.

Conducting a pharmacy activity as part of a small or medium-sized enterprise, which is a community pharmacy, is subjected in general to the use of legally acceptable State aid, provided that the polarization of the pharmaceutical market to entities with diverse forms of activity may determine its scope. However, bearing in mind the social importance of a community pharmacy, as a public health facility, the search for a wide range of sources of financing the activities of pharmacies, including taking into account the prospects of State aid, should be considered legitimate, asserting and significantly strengthening the economic guarantee of the public purpose of the pharmacy activities, i.e. the protection of public health.

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## References

- [1] Act of May 26, 1982, the Law on Advocates, uniform text JoL of 2017, item 2368.
- [2] Act of 15 September 2000, the Commercial Companies Code, consolidated text JoL of 2017, item 1577.
- [3] Act of 7 April 2017 amending the Pharmaceutical Law Act, consolidated text JoL of 2017, item 1015.
- [4] Bacon, K. (2009). *European Community Law of State Aid*. Oxford-New York: Oxford University Press.
- [5] Botta, M. and Schwellnus, G. (2015). Enforcing state aid rules in EU candidate countries: a qualitative comparative analysis of the direct and indirect effects of conditionality. *Journal of European Public Policy*, vol. 22, iss. 3, pp. 335-352.
- [6] Case 40-75 *Société des produits Bertrand SA v Commission*, ECR 1976, p. 1.
- [7] Case 78-76 *Steinike & Weinlig v république fédérale d'Allemagne*, ECR 1977, p. 595.
- [8] Cases 296 and 318/82 *Netherlands and Leeuwarder Papierwarenfabriek BV v Commission*, ECR 1985, p. 809.
- [9] Case 234/84 *Belgium v Commission*, ECR 1986, p. 2263.
- [10] Case C-100/92 *Fonderia A. SpA v Cassa congruaglio per il settore elettrico*, ECR 1994, p. I-561.
- [11] Case C-56/93 *Belgium v Commission* („CDF”), ECR 1996, p. I-723.
- [12] Case C-241/94 *France v Commission*, ECR 1996, p. I-4551.
- [13] Case C-288/96 *Germany v Commission*, ECR 2000, p. I-8237.
- [14] Case C-6/97 *Italy v Commission*, ECR 1999, p. I-2981.
- [15] Case C-200/97 *Ecotrade Srl v Altiforni e Ferriere di Servola SpA (AFS)*, ECR 1998, p. I-7907.
- [16] Case C-251/97 *France v Commission*, ECR 1999, p. I-6639.
- [17] Case C-256/97 *Déménagements-Manutention Transport SA*, ECR 1999, p. I-3913
- [18] Case C-404/97 *Commission v Portugal*, ECR 2000, p. I-4897, and opinion of Mr Advocate General Ruiz-Jarabo Colomer delivered on 28 October 1999.
- [19] Cases C-15/98 and C-105/99 *Italy (C-15/98) and Sardegna Lines - Servizi Marittimi della Sardegna SpA (C-105/99) v Commission*, ECR 2000, p. I-8855.
- [20] Case C-114/00 *Spain v Commission*, ECR 2002, p. I-7657.
- [21] Case C-280/00 *Altmark Trans GmbH and Regierungspräsidium Magdeburg v Nahverkehrsgesellschaft Altmark GmbH*, ECR 2003, p. I-7747.
- [22] Case C-457/00 *Belgium v Commission* („Verlipack”), ECR 2003, p. I-6931.

- [23] Case C-172/03 *Wolfgang Heiser v Finanzamt Innsbruck*, ECR 2005, p. I-1627.
- [24] Cases C-182/03 and C-217/03 *Belgium (C-182/03) and Forum 187 ASBL (C-217/03) v Commission*, ECR 2006, p. I-5479.
- [25] Case C-415/03 *Commission v Greece*, ECR 2005, p. I-3875.
- [26] Case C-408/04 P *Commission v Salzgitter AG*, ECR 2008, p. I-2767.
- [27] Cases C-341/06 P and C-342/06 P *Chronopost SA and La Poste v Union française de l'express (UFEX) and Others*, ECR 2008, p. I-4777.
- [28] Case T-214/95 *Het Vlaamse Gewest v Commission*, ECR 1998, p. II-717.
- [29] Case T-14/96 *Bretagne Angleterre Irlande v Commission*, ECR 1999, p. II-139.
- [30] Case T-46/97 *SIC – Sociedade Independente de Comunicação SA v Commission*, ECR 2000, p. II-2125.
- [31] Case T-613/97 *Union française de l'express (UFEX), DHL International SA, Federal express international (France) SNC and CRIE SA v Commission*, ECR 2006, p. II-1531.
- [32] Case T-158/99 *Thermenhotel Stoiser Franz Gesellschaft mbH & Co. KG and Others v Commission*, ECR 2004, p. II-1.
- [33] Cases T-346/99, T-347/99 and T-348/99 *Territorio Histórico de Álava - Diputación Foral de Álava, Territorio Histórico de Guipúzcoa - Diputación Foral de Guipúzcoa and Territorio Histórico de Vizcaya - Diputación Foral de Vizcaya v Commission*, ECR 2002, p. II-4259.
- [34] Case T-274/01 *Valmont Nederland BV v Commission*, ECR 2004, p. II-3145.
- [35] Case T-217/02 *Ter Lembeek International NV v Commission*, ECR 2006, p. II-4483.
- [36] Commission Regulation (EC) No. 70/2001 on aid to SMEs, OJ 2001 L 10/33.
- [37] Commission Regulation (EC) No. 1998/2006, OJ 2006 L 379/5.
- [38] Commission Regulation (EC) No. 800/2008, OJ 2008 L 214/3.
- [39] Commission Regulation (EU) No. 1407/2013, OJ 2013 L 352/1.
- [40] Commission Regulation (EU) No. 651/2014, OJ 2014 L 187/1.
- [41] Community guidelines on state aid for small and medium-sized enterprises, OJ 1992 C 213/2.
- [42] Community guidelines on state aid for small and medium-sized enterprises, OJ 1996 C 213/4.
- [43] Constitutional Tribunal, Judgement of 20/08/1992, Ref. K4/92, OTK 1986-1995/t3/1992/cz2/22.
- [44] Council Regulation No. 994/98, OJ 1998 L 142/1.
- [45] Council Regulations No. 1588/2015, OJ 2015 L 248/1.

- [46] De Cecco, F. (2013). De minimis and exceptional circumstances as grounds for interim relief against recovery of state aid: *Hellenic Republic v. Commission*. *Common Market Law Review*, vol. 50, iss. 5, pp. 1479-1488.
- [47] Florio, M., Vallino, E. and Vignetti, S. (2017). How to Design Effective Strategies to Support SMEs Innovation and Growth During the Economic Crisis: Lessons from Ex-post Evaluation of 2007-2013 ERDF Programmes. *European Structural and Investment Funds Journal*, vol. 5, iss. 2, pp. 99-110.
- [48] Kekelelis, M. (2008). The big Enterprise of defining SMEs. *European State Aid Law Quarterly*, vol. 7, iss. 1, pp. 16-22.
- [49] Kidyba, A. (red.). (2016). *Meritum Prawo Spółek*. Warszawa: Wolters Kluwer.
- [50] Kondrat, M., Masełbas, W., Stefańczyk-Kaczmarzyk, J. and Zieliński W. (2016). *Prawo Farmaceutyczne. Komentarz*. Warszawa: Wolters Kluwer.
- [51] Mause, K. and Gröteke, F. (2017). The Economic Approach to European State Aid Control: A Politico-Economic Analysis. *Journal of Industry, Competition and Trade*, vol. 17, iss. 2, pp. 185-201.
- [52] Micheau, C. (2015). Tax selectivity in European Law of State Aid: Legal assessment and alternative approaches. *European Law Review*, vol. 40, iss. 3, pp. 323-348.
- [53] Milhet, A.M. (2017). Are European state aid payments creditable Foreign taxes? *Georgetown Law Journal*, Vol. 105, Iss. 5, pp. 1433-1452.
- [54] Nicolaides, P. (2013). Competition and advantage under internal market and state aid rules: Is there a gap in the law? *Legal Issues of Economic Integration*, vol. 40, iss. 3, pp. 271-290.
- [55] Nicolaides, P. (2014). An economic assessment of the usability of the new general block exemption regulation for state aid. *European Competition Journal*, vol. 10, iss. 3, pp. 403-417.
- [56] Nicolaides, P. (2015). A critical analysis of reductions from environmental taxes in the new guidelines on state aid for environmental protection and energy, 2014-2020. *Energy and Environment*, vol. 26, iss. 4, pp. 573-586.
- [57] Nicolini, M., Scarpa, C. and Valbonesi, P. (2017). Determinants of state aid to firms: The case of the European automotive industry. *Industrial and Corporate Change*, vol. 26, iss. 3, pp. 399-420.
- [58] Pharmaceutical Law of 6 September 2001, consolidated text JoL of 2017, item 2211
- [59] Podsiadło, P. (2014). Block Exempted Aid As an Instrument of State Aid Policy in the European Union. In *16th International Scientific Conference Finance and Risk 2014, Vol. 1*. Bratislava: University of Economics in Bratislava, Faculty of National Economy, pp. 188-197.
- [60] Podsiadło, P. (2016). Regional State Aid and Its Impact on the Competitiveness of the EU Member States. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 771-781.

- [61] *Rationale for the parliamentary draft amendment to the Pharmaceutical Law Act.* [online]. [cit.2018-02-22]. Available at: <http://www.sejm.gov.pl/sejm8.nsf/druk.xsp?nr=1126>.
- [62] Treaty on the Functioning of the European Union (TFEU), Consolidated version 2012, OJ C 326, 26.10.2012.
- [63] Vasin, S.M. and Gamidullaeva, L.A. (2015). Increasing the efficiency of state institutional aid to small innovative enterprises. *Review of European Studies*, vol. 7, iss. 11, pp. 77-88.
- [64] Veebel, V., Ploom, I. and Kulu, L. (2015). Shortcomings of the EU state aid model from peripheral perspective: The case of Estonian Air. *Baltic Journal of Economics*, vol. 15, iss. 1, pp. 50-64.



## **European Policy of Products' Quality Management and Improvement**

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### ***Abstract***

*Management and improvement of products' quality in the European framework could be realized on two ways: obligatory and non-obligatory. Obligatory way concerns law sphere. It is regulated by general regulations, directives, decisions, suggestions concerning directives and by national regulations of each EU member. Two main directives are important in this area: Council Directive 85/374/EEC concerning liability for defective products and Directive 2001/95/EC of the European Parliament and of the Council of 3 December 2001 on general product safety. Mentioned above constitutes one side of products' quality management and improvement. From the other side, non-obligatory ways of following activities exist, like quality management concepts (Total Quality Management), ISO norms concerning quality management and improvement systems as well as European and national quality awards, presenting self-assessment way of quality creating. The main purpose of the article is to present obligatory and non-obligatory instruments of products' quality management and improvement.*

**Keywords:** *European Foundation for Quality Management, European regulations for products' quality, improvement, ISO, management*

**JEL Classification:** *K23, L15, O19*

### **1. Introduction**

Instruments of competitiveness on European market are very differentiated. Not only brand, image, size of a company, technology progress and others are relevant, but above all wide meaning quality. Ensuring of proper quality of processes, products and services is one of the biggest challenge of contemporary companies. Creating a proper policy of quality guarantees functioning of a company.

The following article constitutes a theoretical-cognitive study showing European policy of products' quality management and improvement. The author presented two ways of products' quality creating and developing: obligatory and non-obligatory. The first one concentrates around law acts, being an element of each the EU member national system. Mainly, acts relate to directives, defining manufacturing processes, customer safety and analysed products' quality. Non-obligatory sphere makes up a wide catalogue of instruments created by international and European institutions like: International Organization for Standardization (ISO), European Normalization Committee and European Foundation for Quality Management. The most practical instruments are: concept Total Quality Management, European Quality Award as well as quality management systems organized according to ISO norm 9001. Mentioned instruments were described briefly.

The main purpose of the article is to present obligatory and non-obligatory instruments of products' quality management and improvement.

## **2. Obligatory European Framework of Products' Quality Management and Improvement**

Obligatory European framework of products' quality management and improvement is realized by law acts.

European Union (EU) law consists of following types of acts (Ładoński, Szoltysek, 2007):

1. Regulations, have the biggest influence. They are addressed to all EU members as well as to their citizens. They must be realized fully. Regulations constitute so called secondary acts of EU, interfering in national law systems of members, becoming their integral part. They are used to unify law system in the EU and unified areas become their only domain.
2. Directives, obligatory acts for members, except individual parties which are obliged, in exact time, to create national act realizing a task defined by a directive. Forms of realization are selected by a member.
3. Decisions, addressed to exact EU member.
4. Suggestions, non-obligatory, except situations, when they interpret directives.

One of many barriers blocking creating of common union market was technical barrier. They were coming from different in each Community country norms and technical acts, defining requirements concerning manufacturing process, launching products on the market and supervision over the market of products being a subject of transaction or use (ex post supervision). Union acts were not enough to realize a real liberty of products' exchange. Removing of barriers was realized by technical harmonization, using so called norms of "old approach" and "new approach" (Kawecka-Wyrzykowska, Synowiec, 2004).

"Old approach" directives have mandatory character. Their advantage is easiness of conformity assessment realization, because they present detailed requirements, what makes easy conformity control. In this situation simple comparison of parameters of exact product with parameters defined in a directive is enough. Their disadvantage is slow update, what was causing that they were a barrier stopping research-development works. Following approach exists presently, but in selected sectors (Ładoński, Szoltysek, 2007).

"New approach" to technical harmonization was created in 1985. It has following characteristics (Zalewski, 2004):

- a. harmonization concerns only basic requirements relating to safety,
- b. normalization organizations prepare detailed technical norms (voluntary) for products, taking into account directives,
- c. free trade of products is guaranteed, according to harmonized norms,
- d. directives are transformed into national law.

Harmonized directives have basic requirements concerning: specific characteristics, relevant for safety, health protection, environment, research and measuring procedures and organization accrediting research and measuring laboratories. These directives ensure that in trade safe products for health, life and environment appear.

Existing of Community market, enabling free products trade, intensified quality oriented adjusting activities. Obligation of each EU member to protect its citizens as well as issues concerning wide meaning quality achieved status of important and constitute one of the most important area of law activities in the EU. Many normative acts exist regulating problems of

quality assurance and development by system and product certification. Achieving by consumer policy so called status of horizontal policy caused that improvement of life quality in the framework of availability, variety, quality and safety of products must be accepted in all lawful and economic aspects (Krawczyk, 2008).

Policy of a consumer protection includes three main spheres: public health, products safety and consumer rights. Products safety in the EU is ensured by normalization system, warning system RAPEX, monitoring of consumers problems and placing on labels detailed information about products (Szczepańska, 2007).

Many different European law acts regulate policy of products' quality management and improvement. Two of them are vitally important:

1. Directive 1999/34/EC of the European Parliament and of the Council of 10 May 1999 amending Council Directive 85/374/EEC on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products (eur-lex.europa.eu. [online], 2018).

Directive defines meaning of a defective product. It means defective, when it does not provide the safety which a person is entitled to expect, taking all circumstances into account, including:

- a. the presentation of the product,
- b. the use to which it could reasonably be expected that the product would be put,
- c. the time when the product was put into circulation.

The producer shall not be liable as a result of this Directive if he proves:

- a. that he did not put the product into circulation,
- b. that, having regard to the circumstances, it is probable that the defect which caused the damage did not exist at the time when the product was put into circulation by him or that this defect came into being afterwards,
- c. that the product was neither manufactured by him for sale or any form of distribution for economic purpose nor manufactured or distributed by him in the course of his business,
- d. that the defect is due to compliance of the product with mandatory regulations issued by the public authorities,
- e. that the state of scientific and technical knowledge at the time when he put the product into circulation was not such as to enable the existence of the defect to be discovered,
- f. in the case of a manufacturer of a component, that the defect is attributable to the design of the product in which the component has been fitted or to the instructions given by the manufacturer of the product.

2. Directive 2001/95/EC of the European Parliament and of the Council of 3 December 2001 on general product safety (eur-lex.europa.eu. [online], 2018).

The purpose of this Directive is to ensure that products placed on the market are safe. "Safe product" shall mean any product which, under normal or reasonably foreseeable conditions of use including duration and, where applicable, putting into service, installation and maintenance requirements, does not present any risk or only the minimum risks compatible with the product's use, considered to be acceptable and consistent with a high level of protection for the safety and health of persons, taking into account the following points in particular:

- a. the characteristics of the product, including its composition, packaging, instructions for assembly and, where applicable, for installation and maintenance,
- b. the effect on other products, where it is reasonably foreseeable that it will be used with other products,

- c. the presentation of the product, the labelling, any warnings and instructions for its use and disposal and any other indication or information regarding the product,
- d. the categories of consumers at risk when using the product, in particular children and the elderly.

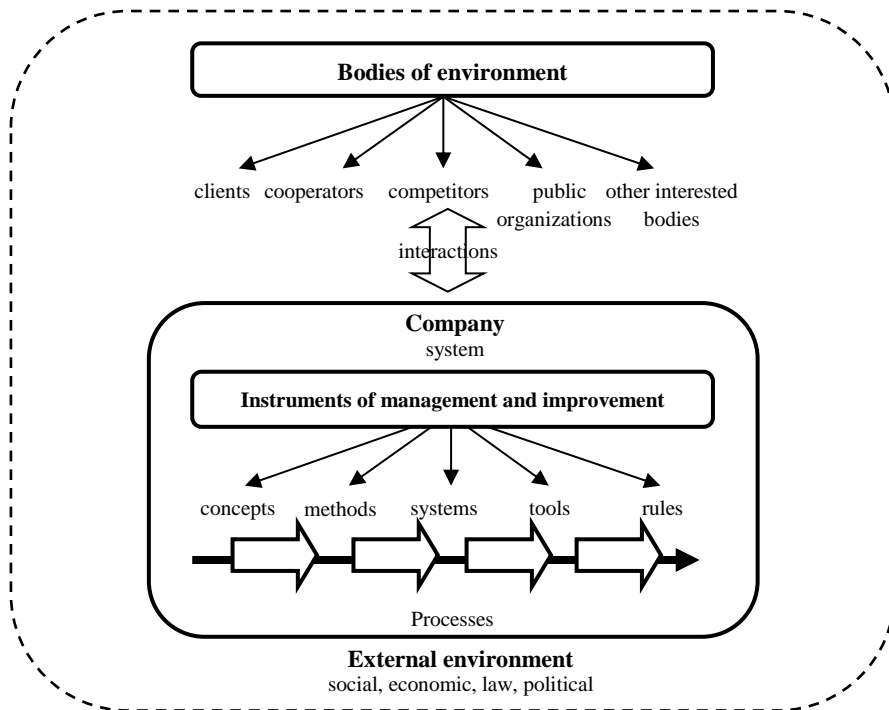
Producers shall be obliged to place only safe products on the market.

Presented directives protect customers by ensuring quality of products on the market.

### 3. Non-Obligatory Instruments of Products’ Quality Management and Improvement – International and European Dimension

Non-obligatory instruments of products’ quality management and improvement could be defined as presented on the figure 1.

**Figure 1: Non-Obligatory Instruments of Products’ Quality Management and Improvement**



Source: personal elaboration

They could be classified as following (Jakubiec, 2016):

1. Concepts of products’ quality management and improvement, like Total Quality Management, Lean Management, Kaizen, Six Sigma, self-assessment concepts defined by European Quality Award (EQA) (organized by European Foundation for Quality Management), Polish Quality Award, ISO 10014 and ISO 9004.

2. Rules of quality management and improvement described as: Deming rules, rules of continuous improvement (Kaizen), rules of excellence (EQA) and quality rules coming from ISO 9001.
3. Quality management systems, being system solution for quality management and improvement, concerning all processes in a company. The most popular quality management system is organized according to ISO 9001. Following quality management and improvement standard is the most popular normative solution in this area around the world.
4. Methods of quality management are classified into two groups: concerning designing process and concerning control process. The most popular among companies are methods: Failure Mode and Effect Analysis, Quality Function Deployment and Statistical Process Control. They constitute middle term interactions, planned and repeatable acting relating to quality ensuring tasks.
5. Tools of quality management and improvement are useful instruments in short time decisions making. They collect quantitative and qualitative data supporting ensuring of proper quality. The most popular tools are as follows: brain storm, flowchart, control chart, Ishikawa figure, Pareto figure, histogram and correlation diagram.

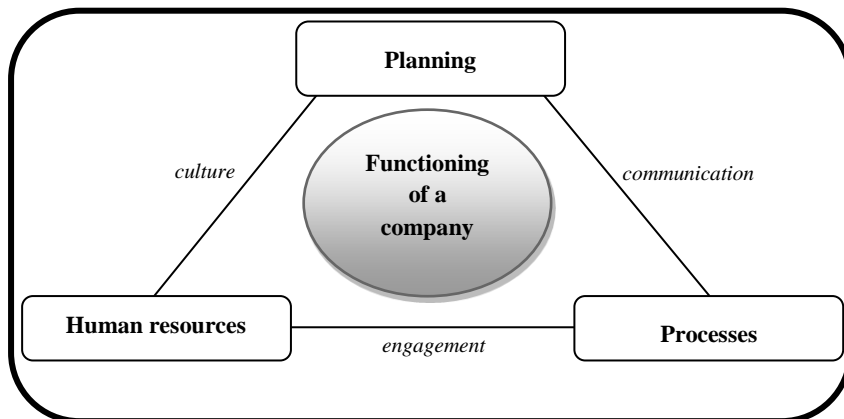
Below, brief characteristic relating to non-obligatory instruments of European policy of products' quality management and improvement was presented.

Total Quality Management (TQM) constitutes complex methodology of quality management and improvement, especially quality of processes and products. Main assumptions of TQM are as follows (Certo, Certo, 2009; Jakubiec, 2017):

1. Customer approach, needs and expectations of customers create a policy of a company.
2. Process approach, companies are organized as a system of processes, connected and measured.
3. People engagement, all employees are engaged in quality matters.
4. Continuous improvement, processes are improved continuously.

Figure 2 shows contemporary model of TQM. Mentioned above assumptions base on culture, communication and engagement.

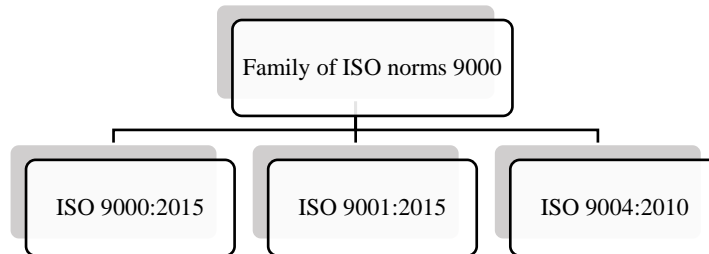
**Figure 2: Contemporary Model of Quality Management and Improvement**



Source: Wiśniewska, Grudowski (2014)

Another instrument of non-obligatory area of products' quality management and improvement constitutes a family of ISO norms 9000. Norms were prepared by International Organization for Standardization in 1987 and updated a few times. Norms present requirements to implement, functioning and improving of quality management system. Following family of ISO norms presents figure 3.

**Figure 3: ISO Norms Concerning Quality Management System**



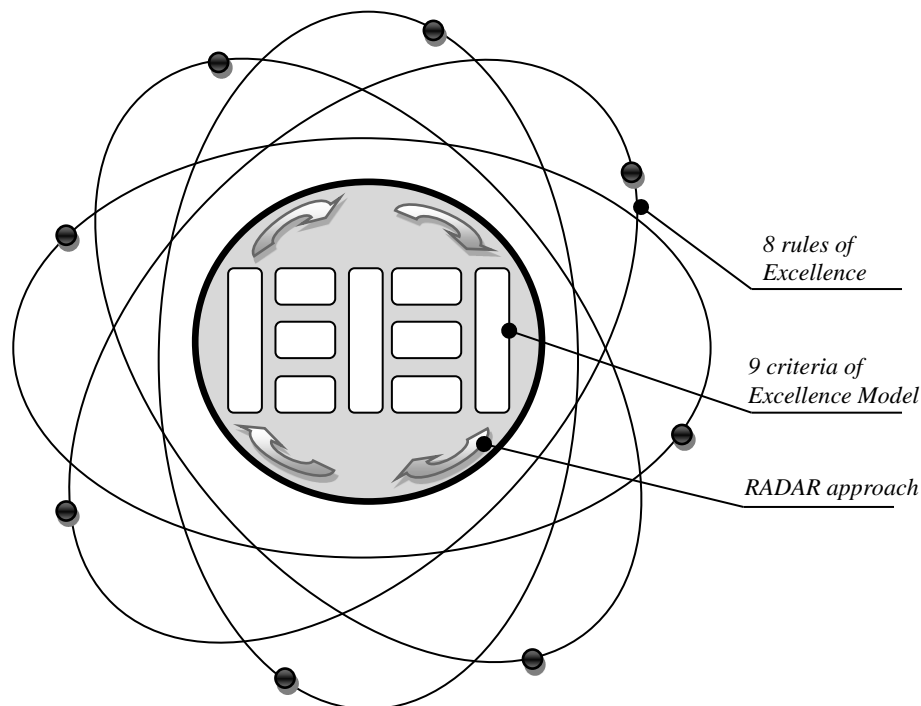
Source: personal elaboration

Quality management system organized according to ISO 9001 is the most popular solution in quality area around the world and very often is a first step to realize TQM assumptions (Adámek, 2016). Rules relating to organization of quality management system are following (Quality Management System. Terminology, 2015; Quality Management System. Requirements. 2015): customer approach, leadership, people engagement, process approach, improvement, decisions making based on facts and relations management. Following rules correspondent with TQM assumptions.

Important instrument in non-obligatory policy of quality creating presents quality awards. European level is completed by European Quality Award established in 1992 by European Foundation for Quality Management (EFQM). Organization created Excellence Model including quality award. EFQM model shows figure 4. Model consists of 8 rules of Excellence, 9 criteria of Excellence Model and improvement approach RADAR (Results, Approaches, Deploy, Assess and Refine). Rules of Excellence are similar to TQM assumptions and ISO quality management rules, and are as follows: adding value for customers, creating a sustainable future, developing organizational capability, harnessing creativity and innovation, leading with vision, inspiration and integrity, managing with agility, succeeding throw the talent of people, sustaining of outstanding results.

Criteria of EQA are divided into two groups: potential concerning: leadership, people, strategy, partnership, resources, processes, products, services and results presenting: people results, customer results, society results and business results. Criteria based on learning, creativeness and innovativeness.

Polish Quality Award as national answer for EQA was established in 1995. Criteria of Polish Quality Award are very common with EQA criteria. This way of quality ensuring is very popular among polish companies and organizations and constitutes important non-obligatory instrument of wide meaning European policy of products' quality management and improvement.

**Figure 4: EFQM Model**

Source: EFQM Model [online], 2018

Presented non-obligatory instruments of products' quality management and improvement express only a part of wider catalogue of instruments ensuring proper quality of processes and products. They were showed in following paper because their popularity and practical use. The author plans to continue this topic in next papers, taking into consideration further instruments.

#### 4. Conclusion

Following article presents European Union law acts regulating quality and safety of products and non-obligatory instruments of management prepared mainly by international and European organizations like ISO or EFQM. Both spheres, obligatory and non-obligatory are used to realize products' quality management and improvement. Main law acts concern two directives: Directive 1999/34/EC of the European Parliament and of the Council of 10 May 1999 amending Council Directive 85/374/EEC on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products and Directive 2001/95/EC of the European Parliament and of the Council of 3 December 2001 on general product safety. Non-obligatory area concerns management instruments like: Total Quality Management, ISO 9001 and rules and criteria of European Quality Award. Directives and instruments were presented in the following article.

## References

- [1] Adámek, P. (2016). Consequences of Corporate Social Responsibility Approach in Voluntary European and Global “Responsible” Initiatives. In Kovářová, E., L. Melecký and M. Staničková (eds.). Proceedings of the 3rd International Conference on European Integration 2016. Ostrava: VŠB - Technical University of Ostrava, 2016, pp. 19-27.
- [2] Certo, S., C., Certo, S. T. (2009). *Modern management – concepts and skills*. New Jersey: Prentice Hall 11<sup>th</sup> edition.
- [3] EFQM (2017). EFQM Model [online]. [cit.2018-02-22]. Available at: <http://www.efqm.org/efqm-model/model-criteria>
- [4] Jakubiec, M. (2017). *Quality oriented company management*. Warszawa: Difin.
- [5] Jakubiec, M. (2016). Quality of Higher Education as a Factor of European Companies’ Competitiveness – Case of Poland-Czech Republic Cross-Border. In Kovářová, E., L. Melecký and M. Staničková (eds.). Proceedings of the 3rd International Conference on European Integration 2016. Ostrava: VŠB - Technical University of Ostrava, 2016, pp. 383-390.
- [6] Kawecka-Wyrzykowska, E., Synowiec, E. (2004). *European Union. Part 1*. Warszawa: Instytut Koniunktur i Cen Handlu Zagranicznego.
- [7] Krawczyk, A. (2008). Normative circumstances of quality. *Quality Problems*, vol. 7, p. 11.
- [8] Lex Europa (2018). [online] [cit.2018-02-25] Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:31985L0374&from=PL>
- [9] Ładoński, W., Szoltysek, K. (2007). *Quality management. Part 2 Protection of products’ quality in logistic chain*. Wrocław: University of Economics.
- [10] Quality Management System. Terminology. (2015) Warsaw: Polish Normalization Committee.
- [11] Quality Management System. Requirements. (2015). Warsaw: Polish Normalization Committee.
- [12] Polish Quality Award (2018). [online] [cit.2018-02-22]. Available at: <http://www.pnj.pl/files/articles/25/podstawowe%20dane%20konkursu%20pnj.pdf>
- [13] Serenčės, P., Rašovská, A., Čierna, Z., Rábek, T., Tóth M. (2014). Impact of European Integration on Agriculture in Slovakia. In Honová, I. et al. (ed.). Proceedings of the 2<sup>nd</sup> International Conference on European Integration 2014. Ostrava: VŠB – Technical University of Ostrava, 2014, pp. 610-617.
- [14] Szczepańska, K. (2007). (Not) new rights of a consumer. *Quality Problems*, vol. 10, pp. 18-23.
- [15] Wiśniewska, M., Z., Grudowski, P. (2014). *Quality management and innovativeness. Experience of Pomerania organizations*. Gdańsk: InnoBaltica sp. z o.o.
- [16] Zalewski, R. (2004). *Quality management in food production*. Poznań: University of Economics.



## **Trust as a Determinant of Economic Development in Selected European Countries**

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### **Abstract**

*Trust can be examined on micro- and macroeconomic level. That is why, when we describe trust on macroeconomic level, we consider its impact on various macro indexes like for example Development and Economic Growth. There are no doubts, that trust is one of crucial elements in Social and economic life. F. Fukuyama was right, when he claimed, that "the minimum level of trust and honesty we assume as a certainty and we forget, that these values are inherent element of economic life, essential factor that has impact on correct functioning Economy" (Fukuyama 1997, p. 179). Trust as a factor influencing Social and Economic Development and Growth has become more important in Institutional Economics. D.C. North said that trust and various kinds of norms, legal rules are important for Economic effectiveness. The main purpose of this article is to identify the impact of trust on Development and Economic Growth in different Countries. The research is based on secondary sources, and research results which present relation between trust and Development and Economic Growth in societies.*

**Keywords:** *economic development, economic growth, integration process, the European Union, trust*

**JEL Classification:** *O11, I30, I39, Z10*

### **1. Introduction**

Economic growth and development reach various levels in individual countries (comp. Mynarzová, a Kaňa, 2014, s.499 and next). While discussing economic growth, we primarily mean the process of growth of resources and consumer goods. Economic growth is most commonly measured by real GDP growth rate in a given year. Economic growth is a component of a broader notion of economic development that considers not only the increase in quantitative indices but also qualitative changes in living conditions of the population.

Many researchers make an attempt to explain the causes of diverse level of economic development in individual countries, identify determinants affecting economic growth, as well as relationships between specific determinants and economic growth. Trust which is an example of informal institutions is one of these determinants. In institutional economics the notion of institutions represents both formal and informal principles and norms that control the way in which individuals behave in the society (Groenewegen, Spithoven, van den Berg, 2012, p. 24). Institutions establish some framework that determines the area of implementation of decisions and transactions in economy. Therefore, many economists emphasise their remarkable impact on the possibilities of socio-economic development (comp. D. Rodrik, A. Subramanian, F. Trebbi, 2004, p. 131 – 165).

Considering the studies of impact of trust on economic growth, S. Knack and P. Keefer (Knack and P. Keefer, 1997, pp. 1251 – 1288) were the forerunners in this area. Using indicators of trust and civic norms from the World Value Survey for 1981 and 1991 in 29 countries, they analysed the impact of these determinants on economic growth. Research conducted by P. F. Whiteley (Whiteley, 2000, pp. 443 – 466) is another example of studies on the level of trust on economic growth (measured by the size of GDP per capita). Data from World Value Survey for the period between 1970 and 1992 from 34 countries were used. Research performed by P. J. Zak and S. Knack (Zak and Knack, 2001, pp. 295 – 321) who used the data for the period 1970 – 1992 from 41 countries for their research concerning the impact of trust on economic growth is another example. Studies conducted by J. J. Sztaudynger, P. Starosta and E. Ambroziak (Sztaudynger, Starosta, Ambroziak, 2016, pp. 647 – 673) based on panel data of the European Social Survey for the years 2006 – 2012 including 22 countries is still one more example of research on the impact of trust on economy and its growth.

Further part of the paper is an attempt to compare the above research results and indication (proving) of relationships between the level of trust and economic growth in selected countries. Critical analysis of secondary sources of information including results of research on relationships between trust and economic development is the research method applied in the paper.

## **2. Trust as an Example of Institution Affecting Economic Development**

In institutional economics the notion of “institution” represents the rules of the game in the society, established limitations of formal and informal character, durable systems of determined and implemented social rules, collective actions including non-arranged habits, as well as organised and well-functioning organisations and general habits existing in the sphere of economy. D.C. North defines institutions as “the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction. In consequence they structure incentives in human exchange, whether political, social, or economic. Institutional change shapes the way societies evolve through time and hence is the key to understanding historical change” (North, 1990, p. 11). He continues to state that “Institutions include any form of constraint that human being devises to shape human interaction. (...) formal constraints – such as rules that human being devise (...) informal constraints such as conventions and codes of behaviour” (North, 1990, p. 12). On the other hand, G.M. Hodgson writes that “Institutions are the kinds of structures that matter most in the social realm: they make up the stuff of social life. The increasing acknowledgement of the role of institutions in social life involves the recognition that much of human interaction and activity is structured in terms of overt or implicit rules. Without doing much violence to the relevant literature, we may define institutions as systems of established and prevalent social rules that structure social interactions” (Hodgson, 2006, p. 2, 18).

The fact that institutions affect economic development is unquestionable, however, only some of them have a positive impact. As G.W. Kołodko writes “Institutions can be good and bad. Bad institutions – causing stagnation – are those that discourage to make efforts and take risk accompanying business activity while hampering people’s entrepreneurship. Stiff bureaucracy and centralized management of state-owned enterprises are institutions. Mafia and organized crime are institutions. Money laundering is an institution. (...) Good institutions – supporting development – are those that firstly guarantee security of business transactions and are also conducive to technological and social progress. The countries are successful if they provide their stability, but at the same time are able to take care of their necessary flexibility and enable

smooth adaptation to changing natural and cultural conditions of management” (Kołodko, 2008, p. 294). Good institutions should perform specific functions that may include:

1. Functions of regulatory nature (Scott, (2008), pp. 35 – 40). Institutions affect people’s (entities’) behaviours; they determine both the actions that are expected by the entities, and those that are unwanted; in general way they control activities of individual entities and entire groups. This function is also related to reduction of uncertainty and coordination of entities’ operations.
2. Cognitive function, i.e. thanks to institutions it is possible to gain knowledge about the environment (close and distant), features and behaviours of entities rooted in traditions or customs.
3. Stabilisation function, i.e. thanks to institutions, rights are protected, social and economic order is created and higher predictability of behaviours of entities is possible. Thanks to institutions it is possible to determine some safe space of activity, and decision-making freedom within this space is provided.
4. Integration function, i.e. institutions establish relationships between individual entities and enable cooperation and collaboration thanks to the fact that these entities share the same system of values.
5. Function of the instruments of impact, i.e. the institutions determine certain limits while creating sanctions related to conduct against the principles; they also define admissible forms of entities’ operation (Comp. Bal – Woźniak, 2012, p. 134).

Trust as an example of informal institution has been the subject of research of many scientists in the area of its influence on various spheres of social and economic life. The notion of “trust”, similarly to the notion of “institution” has no unequivocal definition. One of them is the definitions by Fukuyama who states that “trust is the expectation that arises within a community of regular, honest, and cooperative behaviour, based on commonly shared norms, on the part of other members of that community” (Fukuyama, 1995, p. 26 – 27). On the other hand, according to Lin “trust is confidence or expectation that an alter will take ego's interests into account in exchanges” (Lin, 2001, p. 147). T. Zieliński describes trust in the following way: “trust is a conviction exposed to subjective assessment of probability on the basis of which an individual (A) in a specific situation agrees to be dependent of an individual (B) – a person, institution, thing, etc. while having the sense of relative, specific security determined by this probability, even though negative consequences are possible” (Zieliński, 2012, p. 76). R. Hardin’s definition is also worth mentioning. He states that “(...) Trust is a three-sided relationship: A shows trusts in B, that they will comply with X or regarding X (...) (Hardin, 2009, p. 27).

Analysing various definitions of trust, some of its characteristic features can be distinguished, like for example orientation on future, connection with risk, parties that trust each other or join some structure as well as various level of intensity (Zieliński, 2012, p. 76).

1. Attention should also be paid to the fact that majority of definitions of trust primarily refer to general understanding of this notion and that trust is an element of social capital (comp. Grabowska, Jakubowska, 2016). Therefore, it may be wondered why the level of trust in the society translates into economic growth and development. Major arguments supporting this fact include among others (Ambroziak, Starosta, Sztudynger, 2016, p. 651):
2. Reduction of transaction costs related to reduction in financial contribution on control in the processes of contract conclusion or reduction of risk at transaction conclusion (North, 1990). Therefore, the higher the level of trust in the society, the lower the costs related to financing of institutions exercising control.

3. Benefiting from expansion of cooperative networks. Communities are more willing to start cooperative actions in the situation when there is trust between individual members. Economic benefits resulting from trust and cooperation occur in two ways. Firstly, thanks to the fact that entities trust each other, they may have access to larger part of resources that are not their own, which in turn translates into the possibility of achievement of additional benefits. Secondly, thanks to trust and cooperation small business entities and their financial or physical capital can be joined to make more complex decisions leading to improvement of their competitiveness on market, and achievement of a larger scale of production (return to scale).
4. Defusing tensions and conflicts that result from conflicting economic interests of various social groups. The larger the level of trust, the higher the inclination to legitimisation of existing social inequalities, and also lower vulnerability to initiate conflicts that weaken efficiency of existing socio-economic system. At high trust, national authorities have larger freedom of acting within pursued economic policy. It must be emphasised that the goals of economic policy are long-term, therefore, important level of trust of the society in authorities allows them to make even such decisions within pursued economic policy that are not beneficial for the society in a short time.

Depending on adopted criterion, several types of trust can be distinguished. For example, if we consider the criterion of the scope of influence and / or type of entity or phenomenon, horizontal or vertical, as well as generalised or interpersonal trust can be identified. In the research on the impact of trust on economic development, generalised trust measured by the rate of responses to the question “whether majority of people can be trusted” is considered. On the other hand, the dynamics of economic development is measured with the use of the measure of GDP per capita.

Knack and Keefer (1997) were the first to study the phenomenon of relationship between the level of trust and economic growth. They conducted research based on World Value Survey data from 1981 and 1991 in 29 states from various continents, functioning within market economy (Knack, Keefer, 1997, p. 1255). In the research they stated, among others, that:

1. „Ten-percentage-point rise in that variable is associated with an increase in growth of four-fifths of a percentage point.”
2. „The impact of trust on growth should be higher in poorer countries, if trust is more essential where contracts are not reliably enforced by the legal system, and where access to formal sources of credit is more limited due to an underdeveloped financial sector”.
3. “Each seven – percentage – point rise in trust is associated with a one – percentage – point rise in investment’s share of GDP” (Knack, Keefer, 1997, p. 1260 – 1263).

Research conducted by Whiteley (2000, p. 443 – 466) is another example of studies concerning the impact of trust on dynamics of economic development measured with GDP per capita. In his study, the author started with the neoclassical model by Barro and Sala-i-Martin (1995) and complemented it with the variable of the “level of trust” measured by the rate of responses to the question of “whether majority of people can be trusted”, and the questions concerning the level of trust in family members and own nation. The following conclusions were formulated. Firstly, for the respondents the most important is trust in the members of own nation, then in the family and finally in most people. Secondly, “the comparison of the impact of human and social capital on economic growth must be made with caution. However, overall results of analysis show that social capital (measured with trust index) is a stronger and more

significant cause of economic growth” (Barro, Sala –and- Martin, 1995, quoting Ambroziak at al., 2016, p. 654). He also showed that growth of trust by 1% brings GDP increase by 0.63 percentage point.

Research by Zak and Knack (2001) is another example of empirical studies on the impact of trust on dynamics of GDP per capita. They assumed that:

1. „Higher trust increases investment and growth;
2. Homogeneous societies exhibit higher trust, and thereby investment and growth;
3. Egalitarian distributions of income enhance trust, and thereby raise investment and growth;
4. Discrimination lowers trust, reducing investment and growth;
5. There is a low – trust poverty trap” (Zak, Knack, 2001, p. 306).

While interpreting results of research obtained by Zak and Knack, (they estimated for example the model of GDP growth per capita with the method of least squares), “it can be estimated that growth in trust by 10 percentage points would increase the annual rate of income growth per person (...) by around 0.5 percentage point, which represents the growth of average dynamics of economic growth in studied countries by around a quarter” (Ambroziak, Starosta, Sztadynger, 2016, p. 655).

Studies performed by Sztadynger, Starosta and Ambroziak are another example of research on the impact of trust on economic development. In their research, beside generalised trust, the authors also considered the willingness to help and honesty, and they defined cooperation capital (determined on the basis of these variables) as the primary part of social capital.

In their research, the authors assumed the following:

1. “Cooperative capital” has long-term and short-term impact on economic growth,
2. Three-element cooperative capital explains economic growth better than (most frequently applied) generalised trust” (Ambroziak, Starosta, Sztadynger, 2016, p. 649).

What differs the research by Sztadynger and his team from previous research is first of all showing “the impact of increase in cooperative capital (generalised trust, honesty and subsidiarity) on economic growth, while considering delays in time” (Ambroziak, Starosta, Sztadynger, 2016, p. 649), and long-term as well as short-time analysis.

The most important conclusions from the studies mainly include:

1. “The rate of GDP growth is highly affected by increase in subsidiarity (...),
2. Increase in honesty influences the rate of economic growth with a delay of a year and two years (...),
3. Increase in trust affects the rate of economic growth with a delay of three years,
4. Economic growth in European countries between 2006 and 2012 depended on cooperative capital (...),
5. Increase in three-element index of cooperative capital (trust, honesty and willingness to help) explains considerably better economic growth than the traditional single-element trust index (...) (more in Ambroziak, Starosta, Sztadynger, 2016, pp. 657 – 668).

The above examples of empirical studies concerning the impact of trust on economic growth confirm the adopted assumption that trust as an informal institution has a remarkable impact on socio-economic development. The table below presents the models of long-term impact of the level of trust on GDP growth.

**Table 1: Models of Long-Term Impact of the Level of Trust on GDP Growth**

Model	Data	Averages	Definition of trust	Growth of trust by:	GDP growth
<b>Knack, Keefer</b>	29 countries (and observations)	1980 – 1992	Generalised	10 p.p.	0.8 p.p.
<b>Whiteley</b>	34 countries (and observations)	1970 - 1992	In family members, countrymen, people in general	1 % (index)	0.63 p.p.
<b>Zak, Knack</b>	41 countries (and observations)	1970 - 1992	Generalised	10 p.p.	0.45 p.p.
<b>Ambroziak, Starosta, Sztadynger</b>	22 countries (and observations – three to six for each country)	2002 - 2012	Generalised, additionally the willingness to help, honesty	0,1 p.p.*	0.35 p.p.

Source: own case study based on E. Ambroziak, P. Starosta, J.J. Sztadynger, Trust, willingness to help and honesty towards economic growth in Europe, *Economist* 2016/5

\*” increase in trust affects the rate of economic growth with a delay of three years – its growth by 0.1 point (in the year  $t - 3$ ) causes acceleration of the pace of GDP change by around 0.35 percentage points”.

### 3. Conclusion

Considerations conducted above are only an attempt to join the discussions concerning the subject of increasingly higher role of informal institutions in economy. Trust is one of these institutions. The higher the level of trust of the entities between each other and towards each other, the greater the chance of best selection of all the parties to transaction, reduction of transaction costs and consequently economic growth and development.

Presented research validate importance of trust in economic development. of a country, Apart from trust, which is one of the example of informel institutions, there are also other formal institutions which have impact on economic growth just like legal norms or rules which regulate functioning of economic entities. That is why further analysis is needed in the area of impact of formal and informal institutions on economic development and growth in individual countries.

### References

- [1] Ambroziak E., Starosta P., Sztadynger J.J. (2016). Trust, willingness to help and honesty towards economic growth in Europe. *Economist*, vol. 5, pp. 647 - 673.

- [2] Bal - Woźniak T. (2012). *Innovativeness in subjective approach. Institutional conditions*. Warsaw: Publisher PWE.
- [3] Barro R.J., Sala – and - Martin X. (1995). *Economic Growth*. New York: McGraw – Hill.
- [4] Fukuyama F. (1995). *Trust. The Social Virtues and the Creation of Prosperity*. New York: Free Press.
- [5] Fukuyama F. (1997). *Trust. Social capital and the creation of prosperity*. Warsaw – Wrocław: Publisher: PWN.
- [6] Grabowska A., Jakubowska A. (2016): Institutions creating social capital in Poland after 1989- selected aspects, European Association for Evolutionary Political Economy, The 28th Annual Conference Industrialisation, Socio-Economic Transformation and Institutions, Manchester Metropolitan University [online]. [cit.2018-02-15]. Available at: [http://eaepe.org/?page=user\\_account&op=viewAbstract&year=2016&abstract\\_i=827](http://eaepe.org/?page=user_account&op=viewAbstract&year=2016&abstract_i=827)
- [7] Groenewegen J., Spithoven A., van den Berg A. (2012). *Institutional economics. An Introduction*. New York: Palgrave Macmillan.
- [8] Hardin R. (2009). *Trust*. Warsaw: Publisher Sic! s. c.
- [9] Hodgson G.M. (2006). What are institutions? *Journal of Economics Issues*, vol. XL, no. 1, pp.1 – 25.
- [10] Knack S., Keefer P. (1997). Does Social Capital Have an Economic Payoff? A Cross – Country Investigation. *Quarterly Journal of Economics*, vol. 112, no. 4, pp. 1251 – 1288.
- [11] Kołodko G. (2008). *Wandering world*. Warsaw: Publisher: Pruszyński i s-ka.
- [12] Lin N. (2001). *Social Capital: A Theory of Social Structure and Action*. Cambridge: Cambridge University Press.
- [13] Mynarzová, M. a Kaňá R. Theory and Practice of Industrial Policy of the EU in the Context of Globalization Challenges. In: *Honová, I. et al. (eds.). Proceedings of the 2nd International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, 2014, pp. 499-507. ISBN 978-80-248-3388-0. (WOS: 000346144900056)
- [14] North D.C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- [15] Rodrik D., Subramanian A., Trebbi F. (2004), Institutions rule; the primacy of institutions over geography and integration in economic development. *Journal of Economic Growth*, vol. 9 (2), pp. 131 – 165.
- [16] Scott W. R. (2008). *Institutions and Organizations. Ideas and Interests*. Los Angeles: Sage Publications.
- [17] Whiteley P.F. (2000). Economic Growth and Social Capital. *Political Studies*, vol. 48/3, pp. 443 – 466.
- [18] Zak P.J., Knack S. (2001). Trust and Growth. *The Economic Journal*, vol. 111, no 470, pp.295 – 321.
- [19] Zieliński T. (2012). Trust as a regulator of economic decisions (literature analysis). *Management and Business Administration. Central Europe*, vol. 4 (117), pp. 73 – 91.

## **Strengthened EU Rules to Tackle Money Laundering and Terrorism Financing and their Implementation in Slovak Republic**

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### **Abstract**

*Money laundering and terrorism financing can have potentially devastating social, economic, and security consequences. The negative impacts of money laundering tend to be magnified in these markets because they tend to have less stable financial systems, a lack of banking regulations and effective law enforcement, and, therefore, are more susceptible to disruption from criminal or terrorism influences. Combating Money laundering is an important part of the overall fight to drug dealing, organised crime and since a number of years, also against terrorist financing. The EU has instituted new rules designed to make it tougher for terrorist groups and criminal organizations to hide their money by moving it into European countries. The aim of this paper is to define the situation in prevention of money laundering in Slovak republic, to analyse the new EU directive known as “fourth anti-money laundering directive” and its incorporation into the legal system of Slovak republic.*

**Keywords:** EU Anti-Money Laundering Directive, financing of terrorism, legal system of SR, Money Laundering

**JEL Classification:** F20, K42, G21

### **1. Introduction**

Money laundering and terrorism financing can have potentially devastating social, economic, and security consequences. The negative impacts of money laundering tend to be magnified in these markets because they tend to have less stable financial systems, a lack of banking regulations and effective law enforcement, and, therefore, are more susceptible to disruption from criminal or terrorism influences. The EU has instituted new rules designed to make it tougher for terrorist groups and criminal organizations to hide their money by moving it into European countries. The aim of this paper is to define the situation in prevention of money laundering in Slovak republic, to analyse the new EU directive known as “fourth anti-money laundering directive” and its incorporation into the legal system of Slovak republic.

Money laundering is a dangerous international criminal activity that includes not only the activities of the underworld, but also the politicians or governments of some states. The global character and size of the laundry is also proven by the fact that, according to expert estimates, \$ 1.5 billion to \$ 2 trillion per year is spent in the world. A large margin between the estimated sums is due to the fact that the discovered cases of washing form only a small part of its actual state.

But before asking the question of how to combat money laundering, perhaps the first question should be: What is causing it? One viable answer is embedded in the globalization and technological advancement that has shaped the world these past few decades. For all the good



that open-borders and online-bank transfers have given us, it has also given criminals a whole new playing field in which to transfer and conceal illicitly gained money, allowing them to lower the transaction costs of crimes. Controlling the hundreds of billions of transnational transactions that take place yearly all over the world has proved to be difficult to say the least. This challenge has been made potentially more difficult with the gaining momentum of a technology named Bitcoin. (Bååth, Zellhorn Handledare, 2016)

Uniformity of AML laws among different countries may deter criminals from laundering money. The ratification of the Vienna Convention can help to facilitate uniformity of legal rules. States need robust domestic laws to tackle money laundering. Money laundering is an international crime, although not always a specific crime in international law. Moreover, it is generally advantageous to consider money laundering to be a specific crime under international law. (Keesoony, 2016)

The system for countering the financing of terrorism can be improved to lower costs and risks to financial institutions and to enhance actionable intelligence. A balance must be sought between the objective, actionable intelligence and the mechanism used to advance that objective. (Simsler, 2011)

The skeptical way (ethical relativism) asserts that there cannot be any intrinsic notion of good/evil. The legally focused way (legal positivism) presupposes that ethics is irrelevant, when lawmakers are doing their job. The distorting way (legal moralism) takes for granted that lawmakers are deciding what is moral/immoral. The ethically focused way (normative ethics) means that ethics say something different than law. Each of the four philosophical positions about money laundering has its own pitfalls. (Dion, 2015)

In 1988, the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances with the purpose to promote co-operation among the parties so that they may address more effectively the various aspects of illicit traffic in narcotic drugs and psychotropic substances having an international dimension and to take necessary measures, including legislative and administrative measures, in conformity with the fundamental provisions of their respective domestic legislative systems. (UN Office on Drugs and Crime, 2013). The United Nations Convention against Transnational Organized Crime was adopted by the Palermo Convention on 15 November 2000. Its protocols introduced the duty to criminalize money laundering, which no longer concerns only narcotics trafficking, but also various other criminal cases. (United Nations Office on Drugs and Crime [online], 2004).

In 1989, the Financial Action Task Force on Money Laundering (FATF) was set up in Paris at the G7 meeting. Its aim is to analyse the trends in money laundering and how to mitigate them. Its most prominent result is the formulation of 40 recommendations to combat dirty laundry, which were supplemented by 9 recommendations for combating terrorist financing after September 11, 2001. FATF recommendations can also be described as a comprehensive anti-money laundering strategy. The FATF currently has 37 members, including countries not only from Europe, North and South America and Australia, but also from Asia and Africa. (FATF [online], 2012-2018).

The Egmont Group is a united body of financial intelligence units (FIUs) from 151 jurisdictions which provides a platform for the secure exchange of expertise and financial intelligence to combat money laundering and terrorist financing (ML/TF). This is especially relevant as FIUs are uniquely positioned to cooperate and support national and international efforts to counter terrorist financing and are the trusted gateway for sharing financial information domestically and internationally in accordance with global AML/CFT standards.

The Slovak Republic became part of this organization in 1998. (EGMONT GROUP [online], 2017).

## **2. Legislation on Money Laundering and Terrorist Financing in EU**

In 1990, the Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime (also known as the Strasbourg Convention) was adopted by the Council of Europe to create an international legal framework for cooperation in the investigation, search, seizure and confiscation of criminal proceeds, as well as, to implement a unified crime policy with a view to protecting society and using modern and effective methods at an international level. In a wider context it was agreed that each party shall adopt the legislative and other measures necessary to classify listed acts as criminal offenses under national law if these acts were deliberately committed. (Council of Europe [online], 1990).

The next Council of Europe Convention on Laundering, Search, Seizure and Confiscation of the Proceeds of Crime and on the Financing of Terrorism (the Warsaw Convention) further upgraded and extended the Strasbourg Convention with a view to penalizing not only the financing of terrorism through money laundering but also through legal activities. The Convention regards access to information on the financial resources of criminal organizations, including terrorist groups, as a key instrument in their fight against terrorism. (Council of Europe [online], 2005).

The Committee of Experts on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism - MONEYVAL is a permanent monitoring body of the Council of Europe entrusted with the task of assessing compliance with the principal international standards to counter money laundering and the financing of terrorism and the effectiveness of their implementation, as well as with the task of making recommendations to national authorities in respect of necessary improvements to their systems. Through a dynamic process of mutual evaluations, peer review and regular follow-up of its reports, MONEYVAL aims to improve the capacities of national authorities to fight money laundering and the financing of terrorism more effectively. (Council of Europe [online], 2018)

The Treaty on European Union provides the legal basis for the adoption of directives on the approximation of the laws of the Member States where their object is the establishment and functioning of the internal market, including the regulation of anti-money laundering measures. In order to safeguard the proper functioning of the financial system and the internal market, European legislation has been adopted. Given the changing nature of the dangers of money laundering and terrorist financing, supported by the continued development of technologies and means available to offenders, it is still necessary to adjust the legal framework in response to these threats.

European Anti-Money Laundering is governed by the following Directives:

1. Council Directive of 10 June 1991 on prevention of the use of the financial system for the purpose of money laundering (91/308/EEC)
2. Directive 2001/97/EC of the European Parliament and of the Council of 4 December 2001 amending Council Directive 91/308/EEC on prevention of the use of the financial system for the purpose of money laundering – Commission Declaration,
3. Directive 2005/60/ EC of the European Parliament and of the Council of 26 October 2005 on the prevention of the use of the financial system for the purpose of money laundering and terrorist financing and

4. Commission Directive 2006/70/EC of 1 August 2006 laying down implementing measures for Directive 2005/60/EC of the European Parliament and of the Council as regards the definition of 'politically exposed person' and the technical criteria for simplified customer due diligence procedures and for exemption on grounds of a financial activity conducted on an occasional or very limited basis.
5. Directive 2015/849 of the European Parliament and the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, amending Regulation (EU) No 648/2012 of the European Parliament and of the Council, and repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive 2006/70/EC

The first and second Directives did not sufficiently cover all the areas where precautionary measures to protect the financial sector had to be applied and did not respond to the many practices that criminals could use to legalize illegal proceeds or which could be used by terrorist financing. Persons covered by the Directive were required to identify and verify the identity of their clients and their associated end-user, as well as to monitor their business relationship with the customer; to report to public authorities (usually a financial intelligence unit) a suspicion of money laundering or terrorist financing and to adopt support measures such as proper staff training and the introduction of adequate internal strategies and practices for prevention.

The third directive defined more precisely the terms "money laundering" and "terrorist financing". Money laundering means deliberate action consisting in the transfer or transfer of property, knowing that the property is based on criminal activity in order to conceal the unlawful origin of the property, its true nature, the secrecy of the true nature of the source, the location, the transfer of the right to such property, as well as the acquisition, possession or use of such property, as well as participation in such proceedings, attempted, aided, directed and counselling related to these actions. This Directive defined the term 'beneficial owner' for the first time. It is a natural person who actually owns or controls a client - a legal person or on whose behalf an operation is carried out, that is, a person who benefits from a financial operation or related operations. The novelty is the specification of "politically exposed persons" (PEPs) defined by the Directive as natural persons to whom important public functions are or have been entrusted, as well as their close family members or persons known to be close partners of such persons. It is also important to define the term "shell banks". Shell Bank (shell or debenture bank) is a credit institution or an institution carrying on business activities registered in a business register of a particular State but whose registered office is only formal and commercial in that State and whose management is in fact taking place outside the territory of that State. The Directive requires Member States to prohibit credit institutions from entering a correspondence relationship with a shell bank or a foreign correspondent bank known to be using its accounts also a shell bank. (Vyhnálik, Fendeková)

The Fourth Anti-Money Laundering Directive reinforces the existing rules by introducing the following changes:

1. reinforcing the risk assessment obligation for banks, lawyers, and accountants;
2. setting clear transparency requirements about beneficial ownership for companies. This information will be stored in a central register, such as commercial registers, and will be available to national authorities and obliged entities
3. facilitating cooperation and exchange of information between Financial Intelligence Units from different Member States to identify and follow suspicious transfers of money to prevent and detect crime or terrorist activities;
4. establishing a coherent policy towards non-EU countries that have deficient anti-money laundering and counter-terrorist financing rules;

#### 5. reinforcing the sanctioning powers of competent authorities.

Full public access to the beneficial ownership registers: Member States will make public certain information of the beneficial ownership registers on companies and business-related trusts. Information on all other trusts will be included in the national registers and available to parties who can show a legitimate interest. The beneficial owners who have 10% ownership in certain companies that present a risk of being used for money laundering and tax evasion will be included in the registries. The threshold remains at 25% for all other companies. The Commission has proposed that existing, as well as new, accounts should be subject to due diligence controls. This will prevent accounts that are potentially used for illicit activities from escaping detection. Passive companies and trusts, such as those highlighted in the Panama Papers, will also be subject to greater scrutiny and tighter rules. (European Commission [online], 2016).

Every legal entity, not only the obliged persons, must enter into the Commercial Register the details of their end-user benefits. The obligation is required to be met during the transition period until 31 December 2019.

According to the information provided by the entities that maintain the relevant registers and lists, approximately 548,000 of obliged persons have been identified in summary. This number is not final. It is several times higher, as some entities may be included among obliged persons on the basis of multiple business activities. (British Chamber of Commerce in SR [online], 2018)

On 20 December 2017, EU ambassadors confirmed the political agreement reached between the presidency and the European Parliament on strengthened EU rules to prevent money laundering and terrorist financing with two main objectives: preventing the use of the financial system for the funding of criminal activities and strengthening transparency rules to prevent the large-scale concealment of funds. The aim is to close down criminal finance without hindering the normal functioning of financial markets and payment systems. Amending directive 2015/849, the agreed text seeks to balance the need for increased security with the protection of fundamental rights and economic freedoms.

### **3. Legislation on Money Laundering and Terrorist Financing in SR**

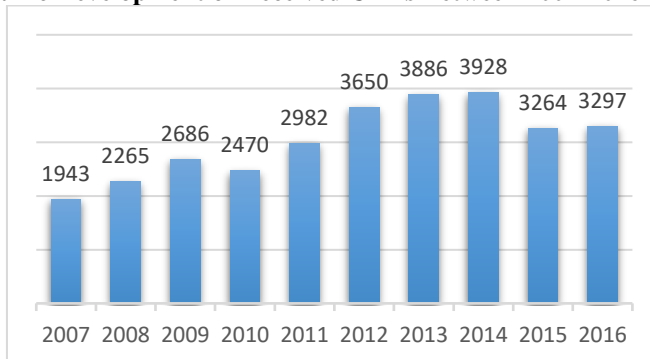
In 1994, the Slovak Parliament passed the Act of the National Council of the Slovak Republic no. 249/1994 Coll. the fight against the legalization of income from the most serious, especially organized forms of crime designed to create specific legal means to prevent, detect and punish the legal and natural persons involved in these illegal activities. One of the most serious shortcomings of this Act was its low enforceability, as it did not impose a penalty mechanism for failing to comply with statutory obligations for liable persons, nor the responsible authority for supervising the application of the law and compliance with its obligations. Another problem was the limitation of the obligation to report suspicious transactions only to banks, not to other financial market participants. In application practice, the law caused interpretative ambiguity and during its effectiveness it failed to meet the objectives. (National Council, 1994) Most of the deficiencies have been eliminated by Act No. 367/2000 Coll. on the Protection against the Legalization of Income from Crime. The law contained more restrictive definition of legalization of proceeds from crime but retained all its decisive and essential features and adapted it to the international requirements at the most. This Law adopted a new basic philosophy of legal norms defining only the detection and prevention of the legalization of criminal proceeds in order to focus it primarily on the prevention of money laundering. (National Council, 2000)

The Act No. 297/2008 Coll. on Protection against the Legalization of Income from Crime and on the Protection against the Financing of Terrorism adopted in 2008 brought these changes: supplemented and clarified the terms used, including a more precise definition of the liable persons, they listed some unusual business transactions relating to legalization as well as to the financing of terrorism, increased the protection of the employee of a liable person who reports (finds) an unusual business transaction before being exposed to threats from third parties or by a person in an unusual business transaction, between the obliged persons limited the ban on the exchange of information on unusual commercial operations, laid down the obligation to draw up a program of the person's own activities aimed at the legalization and financing of terrorism and to specify in more detail its obligatory parts, effective, proportionate and dissuasive sanctions (National Council, 2008)

Regarding the control of the fulfilment of the obligations of the obliged persons, the law was also included among the supervisory authorities by the National Bank of Slovakia and the Ministry of Finance of the Slovak Republic, thus ensuring greater control efficiency. Both institutions have the power to control only the entities in their competence. If the supervising or state supervisor of a liable entity detects a violation of the law, the information shall be immediately notified to the FIU. For banks, it is necessary to define the basic standards of bank behaviour towards itself, within the bank and especially towards clients. In addition to ethical principles, it is important for the bank to identify also regulated rules of conduct in relation to clients and investors regarding integrity, transparency and avoidance of conflicts of interest in the conduct of banking activities.

The Act on the Protection of Legalization of Income from Crime and Terrorist Financing also defines the Financial Intelligence Unit as a special unit within the framework of the Financial Police Service and defines its tasks and powers. We can see the positive results of this Act in increasing dynamic development of received unusual transaction reports (UTR) after 2008 (Figure 1).

**Figure 1: Dynamic Development of Received UTRs Between 2007-2016**



Source: Author's calculations based on Annual Reports of Financial Intelligence Unit of the SR 2009-2016 available on <https://www.minv.sk/?informacie-o-cinnosti-1>

From March 15, 2018, the Amendment to the Act on Protection against the Legalization of Proceeds from Crime and Terrorist Financing, adopted by Slovakia on the basis of a European Parliament Directive, will enter into force. A law that regulates the rights and obligations of the obliged person, concerns more than 500,000 companies. Possible sanctions for its violation may amount up to Euro 5,000,000. These legislative changes are mainly a response to the ongoing developments in money laundering and terrorist financing. The amendment increases

the requirements for client control. The Slovak Republic has been reproached of shortcomings by the MONEYVAL Committee of the Council of Europe. The reason is also an increase in unusual box-office business transactions (e.g. PANAMA Papers), increasing the involvement of grey knights in carousel VAT scams, a 100% increase in phishing, a significant increase in deposits on corporate accounts with tax havens maintained by the Slovak banks, conducted by Chinese citizens living in Hungary, abuse of stolen identity (also corporate), increased fraud, network security breaches, cybercrime and many other activities. (British Chamber of Commerce in SR [online], 2018).

The methods used for money laundering are increasingly sophisticated and complicated, which also makes them more difficult to detect. It is anticipated that in the coming period the attention of the perpetrators of this activity will focus mainly on:

- a. the misuse of electronic money by using more sophisticated ways of committing crime using false identification documents and people in need who are usually resident outside the European Union,
- b. establishment of specialized companies and profiling of professionals carrying out hiding and placing of proceeds from crime and their legalization to order,
- c. investments of foreign entities committing criminal activity in the Slovak Republic and vice versa; investments in real estate, securities, goods of high value and in the shares of companies,
- d. private banking, which offers, in particular, wealthy clients comprehensive banking services, securities transactions issued by the client's bank,
- e. increased organizer and flexibility of offenders to place illegally acquired funds, mainly from Internet fraud and phishing; in the case of organized groups, it is often a national community, and there is a prerequisite for the mutual cooperation of several such groups of different nationalities,
- f. use of domestic and foreign accounts for on-line betting,
- g. expansion of high gambling on the territory of the Slovak Republic,
- h. gradual transfer of trafficking in human beings, drugs, weapons and stolen motor vehicles from natural persons to commercial companies,
- i. gradual engagement of the non-financial sector (notably notaries, lawyers, auditors, tax advisers, accountants and estate agents) into the legalization process,
- j. actively engaging tax advisers and accountants in placing, blending and integrating illegally acquired money into the legal economy,
- k. increasing the number of non-profit organizations, non-investment funds and foundations, while increasing the number of foreign financial transactions through these organizations,
- l. placement of proceeds from crime on life insurance accounts and other alternative savings products outside banks,
- m. increasing the number of transactions realized in favour of companies with headquarters in the so- tax havens or in favour of companies that are registered in a European Union country but which are property linked to companies registered in offshore areas,
- n. enforcement of claims for the refund of value added tax and subsequent placement of revenues in a legal business environment.

#### **4. Conclusion**

Combating Money laundering is an important part of the overall fight to drug traffic, organised crime and since a number of years, also against terrorist financing. Thirty years after adoption

of the first international convention, the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances we can see that this fight is not over yet. Just the opposite. Every day we can realize new challenges to combat money laundering and terrorist financing. The globalisation and new technologies has shaped the world these past few decades. For all the good the open borders and online-bank transfers have given us, it has also given criminals a whole new playing field in which to transfer and conceal illicitly gained money, allowing them to lower the transaction costs of crime. It is more and more difficult to control the hundreds of billions of transnational transactions that take place yearly all over the world.

The Treaty on European Union provides the legal basis for the adoption of directives on the approximation of the laws of the Member States where their object is the establishment and functioning of the internal market, including the regulation of anti-money laundering measures. In order to safeguard the proper functioning of the financial system and the internal market, European legislation has been adopted. Given the changing nature of the dangers of money laundering and terrorist financing, supported by the continued development of technologies and means available to offenders, it is still necessary to adjust the legal framework in response to these threats. We have just implemented the Fourth Directive to our legal system and a new political agreement was reached between European Parliament and the presidency to strengthened EU rules to prevent money laundering and terrorist financing. The main objectives of this new initiatives are to prevent the use of the financial system for the funding of criminal activities and strengthening transparency rules to prevent the large-scale concealment of funds. The aim is to close down criminal finance without hindering the normal functioning of financial markets and payment systems. Amending directive 2015/849, the agreed text seeks to balance the need for increased security with the protection of fundamental rights and economic freedoms.

The anti-money laundering legislation in Slovak Republic is in accordance with international and European Union standards but still we can still see reserves in their application in practice.

### References

- [1] Bååth D., Zellhorn Handledare F. (2016). How to combat money laundering in Bitcoin? An institutional and game theoretic approach to antimoney laundering prevention measures aimed at Bitcoin [online]. [cit.2018-02-22]. Available at: [www.liu.se](http://www.liu.se).
- [2] British Chamber of Commerce in Slovak republic (2018). *The Law on Money Laundering Concerns More Than Half a Million Companies* [online]. [cit.2018-02-22]. Available at: <https://britcham.sk/2018/03/14/the-law-on-money-laundering-concerns-more-than-half-a-million-companies/>.
- [3] Council of Europe (1990). *Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime* [online]. [cit.2018-02-22]. Available at: <https://rm.coe.int/168007bd23>.
- [4] Council of Europe (2005). *Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime and on the Financing of Terrorism* [online]. [cit.2018-02-22]. Available at: <https://rm.coe.int/168008371f>.
- [5] Council of Europe (2018). *Committee of Experts on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism* [online]. [cit.2018-02-22]. Available at: <https://www.coe.int/en/web/moneyval/>.

- [6] Council of the European Communities (1991). *Council Directive of 10 June 1991 on prevention of the use of the financial system for the purpose of money laundering (91/308/EEC)* [online]. [cit.2018-02-22]. Available at: file:///C:/Users/pouzivatel/Downloads/DOC\_1.en.pdf.
- [7] Dion, M. (2015). Is money laundering an ethical issue? *Journal of Money Laundering Control*, vol. 18, iss. 4, pp.425-437 [online]. [cit.2018-03-25]. <https://doi.org/10.1108/JMLC-06-2014-0018>.
- [8] Egmont Group of Financial Intelligence Units (2017). *Annual Report 2015-2016, Combating Money Laundering and Terrorist Financing* [online]. [cit.2018-02-22]. Available at: file:///C:/Users/pouzivatel/Downloads/EGAR-Feb15-2017%20(1).pdf.
- [9] European Commission (2016). *Commission strengthens transparency rules to tackle terrorism financing, tax avoidance and money laundering*, Strasbourg, 5. July 2016 [online]. [cit.2018-02-22]. Available at: [http://europa.eu/rapid/press-release\\_IP-16-2380\\_en.htm](http://europa.eu/rapid/press-release_IP-16-2380_en.htm).
- [10] The European Parliament and the Council (2001). *Directive 2001/97 / EC on prevention of the use of the financial system for the purpose of money laundering – Commission Declaration* [online]. [cit.2018-02-22]. Available at: <https://publications.europa.eu/en/publication-detail/-/publication/57ce32a4-2d5b-48f6-adb0-c1c4c7f7a192/language-en>.
- [11] The European Parliament and the Council (2005). *Directive 2005/60/EC on the prevention of the use of the financial system for the purpose of money laundering and terrorist financing* [online]. [cit.2018-02-22]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32005L0060&from=EN>.
- [12] The European Parliament and the Council (2006). *Commission Directive 2006/70/EC laying down implementing measures of ‘politically exposed person’ and the technical criteria for simplified customer due diligence procedures and for exemption on grounds of a financial activity conducted on an occasional or very limited basis* [online]. [cit.2018-02-22]. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006L0070&from=EN>.
- [13] The European Parliament and the Council (2015). *Directive 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing* [online]. [cit.2018-02-22]. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015L0849&from=EN>.
- [14] FATF (2012-2018). *International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation* [online]. [cit.2018-02-22]. Available at: [www.fatf-gafi.org/recommendations.html](http://www.fatf-gafi.org/recommendations.html).
- [15] Keesoony, S. (2016). International anti-money laundering laws: the problems with enforcement. *Journal of Money Laundering Control*, vol. 19, iss. 2, pp.130-147 [online]. [cit.2018-03-25]. <https://doi.org/10.1108/JMLC-06-2015-0025>.
- [16] The Ministry of Interior of the SR (2018). Annual Reports of Financial Intelligence Unit of the SR 2009-2016 [online]. [cit.2018-02-22]. Available at: <https://www.minv.sk/?informacie-o-cinnosti-1>.
- [17] The National Council of the Slovak Republic (1994). *Act No. 249/1994 Coll. on protection against legalisation of incomes from illegal activities* [online]. [cit.2018-



- 02-22]. Available at:  
[https://www.imolin.org/doc/amlid/Slovakia\\_Act\\_on\\_Protection\\_against\\_Legalisation\\_of\\_Incomes\\_from\\_Illegal\\_Activities.pdf](https://www.imolin.org/doc/amlid/Slovakia_Act_on_Protection_against_Legalisation_of_Incomes_from_Illegal_Activities.pdf).
- [18] The National Council of the Slovak Republic (2000). *Act No. 367/2000 Coll. on the Protection against the Legalization of Income from Crime* [online]. [cit.2018-02-22]. Available at:  
[http://ec.europa.eu/internal\\_market/finances/docs/actionplan/transposition/slovakia/d4.2-sk.pdf](http://ec.europa.eu/internal_market/finances/docs/actionplan/transposition/slovakia/d4.2-sk.pdf).
- [19] The National Council of the Slovak Republic (297). *Act No. 297/2008 Coll. on Protection against the Legalization of Income from Crime and on the Protection against the Financing of Terrorism* [online]. [cit.2018-02-22]. Available at:  
<https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2008/297/20160701>.
- [20] Simser, J. (2011). Terrorism financing and the threat to financial institutions. *Journal of Money Laundering Control*, vol. 14, iss. 4, pp.334-345 [online]. [cit.2018-03-25]. Available at: <https://doi.org/10.1108/13685201111173811>.
- [21] United Nations Office on Drugs and Crime (2004). *United Nations Convention Against Transnational Organized Crime and Protocols Thereto* [online]. [cit.2018-02-22]. Available at:  
[https://www.unodc.org/documents/middleeastandnorthafrica/organised-crime/united\\_nations\\_convention\\_against\\_transnational\\_organized\\_crime\\_and\\_the\\_protocols\\_thereto.pdf](https://www.unodc.org/documents/middleeastandnorthafrica/organised-crime/united_nations_convention_against_transnational_organized_crime_and_the_protocols_thereto.pdf).
- [22] United Nations Office on Drugs and Crime (2013). *The International Drug Control Conventions* [online]. [cit.2018-02-22]. Available at:  
[https://www.unodc.org/documents/commissions/CND/Int\\_Drug\\_Control\\_Conventions/Ebook/The\\_International\\_Drug\\_Control\\_Conventions\\_E.pdf](https://www.unodc.org/documents/commissions/CND/Int_Drug_Control_Conventions/Ebook/The_International_Drug_Control_Conventions_E.pdf).
- [23] Vyhnálik, J. and Fenderáková, I. (2005). Tretia smernica EÚ proti praniu špinavých peňazí a financovaniu terorizmu. In *Biatec*. ISSN 1335-0900, 2005, vol. 13, iss. 9, pp. 10-14.

# **The Influence of the Disposable Income on the Consumption Structure in European Countries – Spatio-Temporal Analysis**

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## **Abstract**

*The aim of this paper is to analyse the spatial and spatio-temporal dependences in matters related to the consumption structure of the Europe across countries in the years 1999-2015. The division of this area into two parts (north-west and central-east) considering the wealth of countries was investigated. This accurateness is the basis for verifying, whether, the consumption structures in these parts of Europe are similar and rely on the values of disposable income observed in countries. The spatial and spatio-temporal tendencies and dependences are surveyed using the conception of spatial and spatio-temporal trends and spatial autocorrelation. The relationship between consumption of the individual groups of goods and the disposable income is investigated using regressive-autoregressive spatial models.*

**Keywords:** *consumption structure, disposable income, spatial autocorrelation, spatial trend*

**JEL Classification:** *C10, D13, E21, I0*

## **1. Introduction**

Consumption is the main factor in Gross Domestic Product (GDP) in all economies. Richer countries are characterised by a higher income, which is then spend for purchasing goods. Therefore the disposable income of households is the main consumption factor. Moreover richer households can afford to buy more luxury goods than the others. It means that the wealth of households influences its consumption structure.

Household final consumption expenditures on chosen groups of goods have been converging for a long time. It means that the consumption structure in the European countries is becoming more and more similar (Nowak and Kochkova; 2011). It can be the result of the convergence process in Europe. This process was investigated by many researchers in their papers, e.g. Carnicky et al. (2016), Corrado et al. (2005), Dall'Erba and Le Gallo (2008), Kulhánek (2012) and von Lyncker and Thoennessen (2017).

The issues of diversification of consumption structure in the European countries have already been discussed, e.g. by Kuśmierczyk and Piskiewicz (2012) and Grzega (2015). They concern noticeable disproportions in the households consumption in Europe. In their papers they look at north-west and east Europe as regions with different consumption structures. Nevertheless, it is difficult to find application of spatial econometrics methods in this topic, although the processes are observed in the spatial units. According to the author, it is significant supplement

to previous studies. Spatial econometrics methods can confirm significance of the spatial differences in the shape of spatial processes.

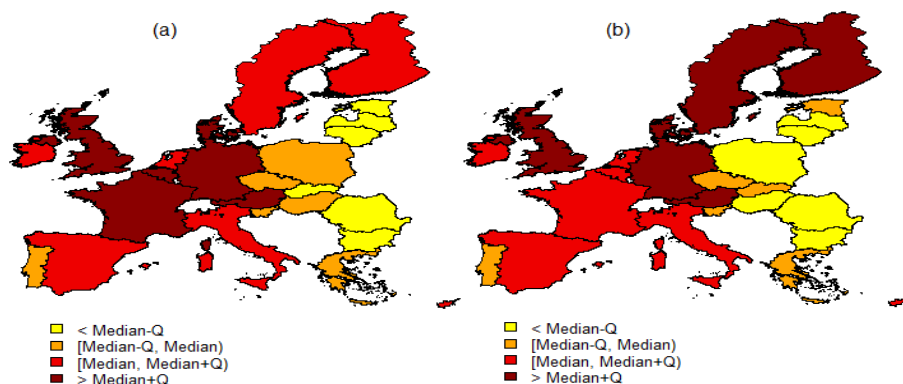
The primary aim of the study is to analyse spatial and spatio-temporal dependence in the consumption structure of the European Union countries (excluding Croatia, Cyprus and Malta) in the period of 1999-2015. There are two groups of goods to be analysed: food and non-alcoholic beverages and also recreation and culture. The first group represents necessity goods, the second – luxury goods. The next step is to analyse influence of the disposable income on these consumption groups considering spatial tendencies and dependence. For the author, from all groups of the Classification of Individual Consumption According to Purpose (COICOP), chosen groups of goods best reflect the character of necessity and luxury goods. In turn, this research indicates the opposite influence of the disposable income on these two groups of goods. That is why these consumption groups have been analysed.

### 1.1 Disposable Income and Consumption

Households disposable income is the main factor determining their consumption level and consumption structure. The consumption of households with higher income are much more diverse than the poorer ones. Thus, the structure of consumption between countries is different.

Figure 1 shows the spatial differentiation of the disposable income (per capita) in the European Union in the years 1999 and 2015.

**Figure 1: Disposable Income per Capita in Europe in the Years 1999 (a) and 2015 (b)**



Source: own elaboration (2018).

Figure 1 presents the certain tendency in both years of investigation. High level of the disposable income (more than median) is observed in west and north part of Europe. Central-east part of the continent is dominated by countries with lower level of disposable income. Maps in Figure 1 clearly indicate the fact that the EU is divided into two parts. The first is north-west Europe and the second is central-east Europe.

## 2. Problem Formulation and Methodology

The study concerns the influence of the disposable income on the consumption structure in EU countries (excluding Croatia, Cyprus and Malta) in the period of 1999-2015. The following indicators have been analysed: the share of final consumption expenditures of households on two groups of goods – food and non-alcoholic beverages and also recreation and culture – in total final consumption expenditures.

The adopted time range and spatial aggregation of this study makes it easy to see the spatial and spatio-temporal tendencies in the shape of the analysed variables. These tendencies and dependence are investigated using the conception of the spatial and spatio-temporal trend, and spatial autocorrelation. For each year of the research classical regression models or spatial models of the impact of disposable income on chosen consumption groups are estimated and verified. Next the spatio-temporal models of the dependence of consumption structure on the disposable income are estimated and verified.

The first hypothesis in this study concerns the large diversity of final consumption expenditures on food and non-alcoholic beverages and also recreation and culture across Europe. The second one applies to the influence of an increase in the disposable income: (1) the negative influence on the share of final consumption expenditures of households on food and non-alcoholic beverages in total final consumption expenditures, and (2) the positive one on the share of final consumption expenditures of households on recreation and culture in total final consumption expenditures.

## 2.1 Data and Model

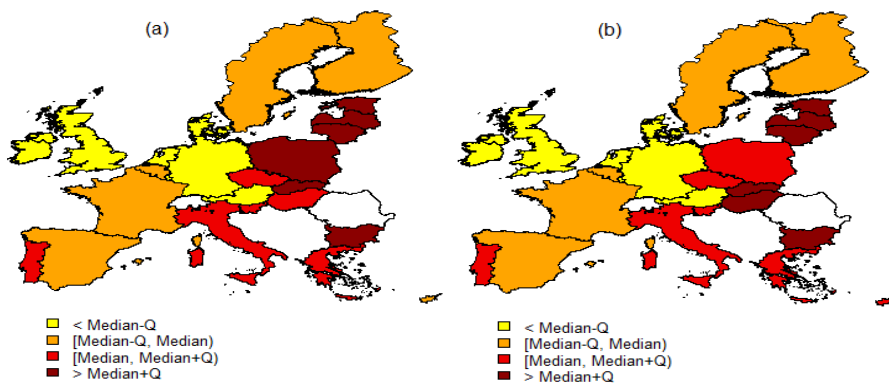
In subsections 2.1.1, 2.1.2 and 2.1.3 source and character of the data, used methodology and results of study are described.

### 2.1.1 Data

The data applied in this study come from the European Statistical Office database. Variables regarding the share of final consumption expenditures of individual categories of goods in total final consumption expenditures are taken directly from database. The values of disposable income per capita are obtained through own calculations. The calculations and figures are made using R-Cran software (version 3.4.1).

Figure 2 shows the spatial differentiation of the share of final consumption expenditures on food and non-alcoholic beverages in total final consumption expenditures ( $Y_1$ ). The highest value of analysed variable in both years is noted in Romania. All EU countries from central-east Europe are characterized by values higher than median. The spatial distribution of this variable displays an opposite regularity as compare with the distribution characterising the level of disposable income per capita.

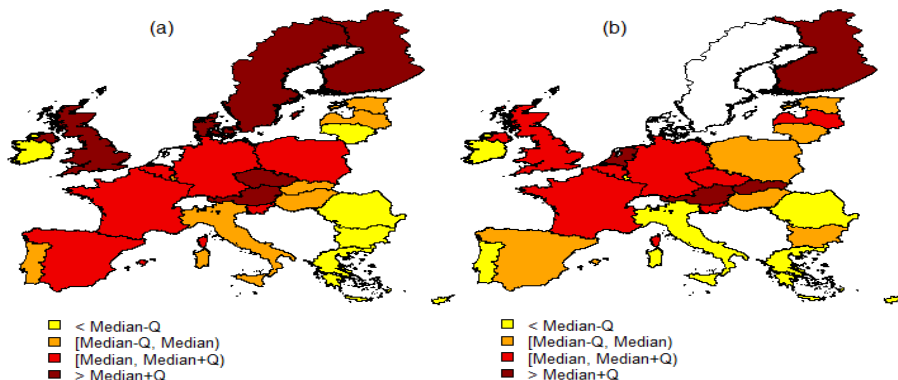
**Figure 2: Share of Final Consumption Expenditures on Food and Non-alcoholic Beverages in Total Final Consumption Expenditures Across Europe in the Years 1999 (a) and 2015 (b)**



Source: own elaboration (2018)

Figure 3 shows the spatial differentiation of share of final consumption expenditures on recreation and culture in total final consumption expenditures ( $Y_2$ ). The highest value of this variable in 1999 is noted in Belgium, instead in 2015 in Sweden. In general, north-west part of Europe is dominated in both years of analysis by countries with the highest level of consumption expenditures on recreation and culture. The spatial distribution of this variable is compatible with the distribution characterising the level of disposable income per capita.

**Figure 3: Share of Final Consumption Expenditures on Recreation and Culture in Total Final Consumption Expenditures Across Europe in the Years 1999 (a) and 2015 (b)**



Source: own elaboration (2018)

### 2.1.2 Methodology

The investigation starts with a research of trend-autoregressive structures of the analysed spatial processes for each year of study. The models of spatial trend are used (Schabenberger and Gotway 2005: 235) and the spatial autocorrelation is tested (Moran 1950, Schabenberger and Gotway 2005: 21). Spatial autocorrelation investigates whether the values of spatial process in neighbouring spatial units are similar or not. Statistically significant positive value of the Moran's  $I$  statistics says that the processes in the neighbouring spatial units are at the similar level. The negative value of this statistics says that the processes in the neighbouring spatial units are at the different level. Random position of the values of the considered process is verified when Moran's  $I$  statistics is statistically non-significant. It is a few possibilities to define neighbourhood. In this research the matrix of connections based on the common border criterion is used.

Then, the spatio-temporal tendencies in analysed variables are investigated using spatio-temporal model (Szulc 2007: 103).

For spatial and spatio-temporal models exhibiting the spatial autocorrelation spatial autoregressive models (Anselin et al. 2004: 34, Arbia 2006: 111) or spatial error models (Anselin et al. 2004: 34) with the influence of disposable income per capita are estimated and verified. Choice between SAR and SEM models is made using LM tests (Anselin et al. 2004: 37-39).

### 2.1.3 Model Calibration

In the first step of the research, spatial trend models are estimated and verified, and spatial autocorrelation is tested. Table 1 presents the results of its estimation and verification.

**Table 1: Spatial Structure of the Variables  $Y_1$  and  $Y_2$** 

Year	Food and non-alcoholic beverages ( $Y_1$ )				Recreation and culture ( $Y_2$ )			
	Degree of spatial trend	R <sup>2</sup>	Moran's I	p-value	Degree of spatial trend	R <sup>2</sup>	Moran's I	p-value
1999	3	0.9038	-0.0794	0.4204	2	0.7603	-0.0399	0.5037
2000	3	0.9180	-0.1279	0.3231	2	0.7487	0.0354	0.3382
2001	3	0.9100	-0.1584	0.2705	2	0.7536	0.0244	0.3617
2002	3	0.8973	-0.2477	0.1424	2	0.7206	-0.0137	0.5587
2003	3	0.8697	-0.2820	0.1068	2	0.7142	-0.0660	0.4482
2004	3	0.8719	-0.2069	0.1973	2	0.6467	-0.2535	0.1327
2005	2	0.7506	-0.2343	0.1565	2	0.5864	-0.2849	0.1021
...								
2009	2	0.7515	-0.2768	0.1094	2	0.6142	-0.2948	0.0946
2010	3	0.8822	-0.1768	0.2419	2	0.5762	-0.2454	0.1445
2011	2	0.7612	-0.3280	0.0647	2	0.6112	-0.2201	0.1744
2012	2	0.7274	-0.3376	0.0569	2	0.6305	-0.1914	0.2144
2013	2	0.7295	-0.3269	0.0623	2	0.6199	-0.2611	0.1253
2014	2	0.7320	-0.3681	0.0393	2	0.6035	-0.2975	0.0900
2015	2	0.7298	-0.3537	0.0460	2	0.6098	-0.3140	0.0778

Source: author's calculations

**Table 2: The Influence of the Disposable Income on the Consumption Structure in EU**

Year	Food and non-alcoholic beverages ( $Y_1$ )		Recreation and culture ( $Y_2$ )	
	Estimate	p-value	Estimate	p-value
1999	-0.4229	0.0094	-0.1104	0.0834
2000	-0.2660	0.0636	-0.1188	0.0530
2001	-0.3760	0.0150	-0.0835	0.1576
2002	-0.3517	0.0209	-0.0739	0.2216
2003	-0.3083	0.0621	-0.0952	0.0953
2004	-0.2844	0.0658	-0.0969	0.1026
2005	-0.6291	0.0000	-0.0974	0.1319
2006	-0.5634	0.0000	-0.0816	0.2108
2007	-0.5512	0.0000	-0.0724	0.2393
2008	-0.4460	0.0000	-0.1620	0.0010
2009	-0.4019	0.0002	-0.1472	0.0009
2010	-0.2076	0.0503	-0.1563	0.0006
2011	-0.3952	0.0001	-0.0712	0.2503
2012	-0.3978	0.0001	-0.0673	0.2524
2013	-0.3781	0.0002	-0.0381	0.4582
2014	-0.1798	0.0550	-0.1083	0.0065
2015	-0.1837	0.0550	-0.0961	0.0191

Source: author's calculations

The degree of the spatial trend for the variable  $Y_1$  is not fixed in all years of research. Only from 2014 the spatial autocorrelation is noted. In the whole period of analysis spatial differentiation of the variable  $Y_2$  is characterized by a second-degree spatial trend and the spatial autocorrelation is not observed. These processes are highly explained by the spatial position (coefficients of determination in spatial trend models for the variable  $Y_1$  are over 0.7 and for variable  $Y_2$  over 0.55).

Table 2 shows the influence of the disposable income on the final consumption expenditures on food and non-alcoholic beverages and recreation and culture. In most of the years, the analysed dependence is significant (adopted level of significance for analysis is 0.05) for variable  $Y_1$ . In the whole period, the sign of estimate of parameter is negative for both variables. Only in the years of 2008-2010 and 2014-2015 the disposable income has a significant influence on the final consumption expenditures on  $Y_2$ .

**Table 3: The Results of Estimation and Verification of Spatial Models with Spatio-temporal Trend for Variables  $Y_1$  and  $Y_2$**

Parameter	Food and non-alcoholic beverages ( $Y_1$ )		Recreation and culture ( $Y_2$ )	
	Estimate	p-value	Estimate	p-value
$\theta_{000}$	-148.4400	0.0096	27.2443	0.0000
$\theta_{100}$	-13.4520	0.0000	-0.0534	0.2898
$\theta_{010}$	11.8550	0.0003	-0.7912	0.0000
$\theta_{001}$	2.0275	0.0233	0.0970	0.3107
$\theta_{200}$	-0.0067	0.6570	-0.0124	0.0000
$\theta_{020}$	-0.2794	0.0000	0.0096	0.0000
$\theta_{002}$	0.0565	0.0497	-0.0077	0.0020
$\theta_{110}$	0.5520	0.0000	0.0036	0.0003
$\theta_{101}$	-0.0124	0.0349	0.0055	0.0000
$\theta_{011}$	-0.1116	0.0004	-0.0013	0.4687
$\theta_{300}$	0.0015	0.0000	-	-
$\theta_{030}$	0.0021	0.0000	-	-
$\theta_{003}$	0.0001	0.8434	-	-
$\theta_{210}$	-0.0001	0.7848	-	-
$\theta_{201}$	-0.0008	0.0000	-	-
$\theta_{120}$	-0.0056	0.0000	-	-
$\theta_{021}$	0.0014	0.0000	-	-
$\theta_{102}$	0.0010	0.0005	-	-
$\theta_{012}$	-0.0010	0.0263	-	-
$\alpha$	-0.2078	0.0000	-0.1017	0.0000
$\beta$	0.2386	0.0001	0.0865	0.0001
$\rho$	-	-	-0.2056	0.0000
$\lambda$	-0.4213	0.0000	-	-
<b>Wald test</b>	102.3100 (0.0000)		23.3560 (0.0000)	
<b>AIC</b>	1749.6000		1314.0000	
<b>Moran test</b>	-0.0297 (0.2869)		-0.0641 (0.1024)	

Source: author's calculations

Then, the spatio-temporal models for analysed variables are estimated and verified. The third-degree of spatio-temporal tendency for variable  $Y_1$  and second-degree of spatio-temporal tendency for variable  $Y_2$  are noted. In both cases, the spatial autocorrelation in model residuals

is observed. Wherefore the spatial dependences are included in models with influence of the disposable income on the share of consumption of chosen groups in total consumption. The spatial autoregressive model for variable  $Y_2$  and the spatial error model for variable  $Y_1$  are estimated. Also in models the following influences on  $Y_1$  and  $Y_2$  are considered: the disposable income per capita in countries (parameter  $\alpha$ ) and the disposable income per capita in neighbouring countries (parameter  $\beta$ ).

The models contain statistically significant parameters. The estimates of the parameters  $\alpha$  and  $\beta$  are negative and positive respectively. Then, the residuals from both models do not show spatial autocorrelation.

### 3. Conclusion

The analysis shows that the consumption of food and non-alcoholic beverages, as well as recreation and culture in Europe is spatially diversified. The countries with higher level of the disposable income consume less food and non-alcoholic beverages than the other ones. This dependence is verified with spatial error model, including also spatio-temporal trend. Dependence of the recreation and culture consumption from the level of disposable income is noted to the same degree as the previous group of consumption goods; although these groups represent goods with different character (necessity goods and luxury goods). The models for the consumption of recreation and culture, as well as food and non-alcoholic beverages require an extension with new processes, e.g. price level in European countries. This will be one of the next steps in the further research of this topic. Moreover the analysis will be extended by spatio-temporal modelling of food, culture, non-alcoholic beverages and recreation separately after the division of groups analysed in this paper.

### References

- [1] Anselin, L., Florax, R. J. G. M. and Rey, S. (2004). *Advances in Spatial Econometrics. Methodology, Tools and Applications*. New York: Springer-Verlag.
- [2] Arbia, G. (2006). *Spatial Econometrics. Statistical Foundations and Applications to Regional Convergence*. Berlin–Heidelberg: Springer-Verlag.
- [3] Carnicky, S., Megyesiova, S., Conkova, M. and Zavadsky, C. (2016). Productivity development and convergence across the EU Member States. *Економічний часопис-XXI*, vol. 162, iss. 11-12, pp. 13-17.
- [4] Corrado, L., Martin, R. and Weeks, M. (2005). Identifying and interpreting regional convergence clusters across Europe. *The Economic Journal*, vol. 115, iss. 502.
- [5] Dall'Erba, S. and Le Gallo, J. (2008). Regional convergence and the impact of European structural funds over 1989–1999: A spatial econometric analysis. *Papers in Regional Science*, vol. 87, iss. 2, pp. 219-244.
- [6] Grzega, U. (2015). Dochód i konsumpcja gospodarstw domowych w Polsce i Unii Europejskiej w latach 2004-2012. *Handel wewnętrzny*, vol. 4(357), pp. 124-134.
- [7] Kulhánek L. (2012). Real Convergence in Central European EU Member States. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 161–170.
- [8] Kuśmierczyk, K. and Piskiewicz, L. (2012). Konsumpcja w Polsce na tle pozostałych krajów Unii Europejskiej. *Konsumpcja i rozwój*, vol. 2, iss. 3, pp. 78-93.



- [9] Nowak, J. and Kochkova, O. (2011). Income, Culture, and Household Consumption Expenditure Patterns in the European Union: Convergence or Divergence? *Journal of International Consumer Marketing*, vol. 23, iss. 3-4, pp. 260-275.
- [10] Moran, P.A.P. (1950). The Interpretation of Statistical Maps. *Journal of the Royal Statistical Society, Series B*, vol. 10, pp. 243-251.
- [11] Schabenberger, O. and Gotway, C. A. (2005). *Statistical Methods for Spatial Data Analysis*. London–New York: Champion & Hall/CRC, Boca Raton.
- [12] Szulc, E. (2007). *Ekonometryczna analiza wielowymiarowych procesów gospodarczych (Econometric Analysis of Multidimensional Economic Processes)*. Toruń: UMK.
- [13] von Lyncker, K. and Thoennesen, R. (2017). Regional club convergence in the EU: evidence from a panel data analysis. *Empirical Economics*, vol. 52, iss. 2, pp. 525-553.

# The Political Economy of Fiscal Deficits: Empirical Evidence from EU Countries

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## **Abstract**

*Fiscal policy has started to regain a lost attention in recent years, both in the academic research and in the government policy agendas. The reasons is obvious, primarily in the European context. Financial, economic and subsequent debt crises have hit the EU economies especially hard and their recovery seems to be rather gradual. The European economies still suffer from the problem of over-indebtedness and the problem of excessive budget deficits. Therefore, the aim of the paper is to evaluate basic economic, institutional and political determinants of budget deficits in the European Union countries. We use an unbalanced cross-country time series data set, comprising all 28 EU countries over the period 1995-2016. Fiscal policy seems to play a stabilizing role, but its counter-cyclical reactions are significantly stronger in recessions, while it does not react to current inflation and changes in the government bond yields. Moreover, some political and institutional variables play statistically significant role as well and appear to be important determinants of fiscal deficits.*

**Keywords:** budget deficit, fiscal policy, political budget cycle, political economy

**JEL Classification:** C26, D72, E62

## **1. Introduction**

Fiscal policy has gained increased attention in recent years, both in academic research and in governments' policy agendas. The reason is quite clear. Financial, economic and subsequent debt crises have hit the EU economies especially hard and their recovery seems to be rather gradual. Fiscal policy has started to play a more prominent role during the crisis and have aroused new questions about its further direction. Partial reassessment of fiscal policy is taking place, stressing its more important role in smoothing the economic cycle and ensuring sustainable economic growth.

On the contrary, the high increase in fiscal deficits during the crisis has reopened up the question of the public finance sustainability and the question of the future of the European welfare state. European fiscal policy thus must manage to sail between the Scylla and Charybdis, between the more active role in the stabilizing the economy and the task to stabilize public debts and budget balances. It is clearly the task of achieving better results in a more constrained environment. Political economy provides an explanation of why this task can be particularly difficult and why its difficulty may vary across EU countries.

Academic research evaluating fiscal policy can be divided into the two main directions. First direction solves the question how economic and social conditions affect fiscal positions. Second direction solves the opposite, how fiscal policy actions affects economic environment.

In this paper, we focus on the first question, assessing economic, institutional and political determinants of government budget deficits.

The aim of the paper is to evaluate fiscal policy reactions to the changes in the economic environment and to assess basic institutional and political determinants of the budget deficits in the European Union countries. The paper proceeds as follows. Section 2 is the literature review. Section 3 includes a description of the data, empirical strategy and underlying empirical model. In Section 4, we discuss the results of the analysis. Section 5 concludes.

## **2. Literature Review**

The paper is empirically oriented and therefore we offer only a survey of the empirical literature in this section. However, let us mention that a large body of literature is devoted to theoretical background of our topic. Leading studies in the political economy or “new political economy” (see especially Drazen (2002) and Persson and Tabellini (2000)) emphasize how private agents’ preferences influence public policies and how budget deficits are partly a reflection of opportunistic behavior of policymakers and changeable institutional design. These studies state that deficits can be explained by more factors (including institutional and political factors) than by economic variables only.

Barro (1979) set up an empirical model based on his equilibrium approach. Changes in the stock of nominal debt were explained mainly by average anticipated rate of inflation, changes in the real government expenditures, corporate bond rates and yields on 10 and 20-year bonds and trend value of real GNP. A central proposition of the model was that deficits are varied in order to maintain expected constancy in tax rates. The model is known as the equilibrium approach to fiscal policy, because it suggests keeping the tax rates constant over time, while deficit will emerge during recessions and surplus during expansions. Barro’s model was rather basic settings for subsequent research since persistent budget deficits during peacetime have increased attention in institutional and political determinants of the deficits.

Political determinants can substantially vary across countries and even within the same country in time. For example, it is usually supposed that left-wing governments are more willing to accept rising government deficits than right-wing governments. Theoretical explanation is mainly based on Hibbs (1977) and Frey and Schneider (1978) and some empirical evidence has been provided by Roubini and Sachs (1989a) or Perotti and Kontopoulos (2002).

Roubini and Sachs (1989b) offer another way in which the design of the political institutions can affect the fiscal outcome. They found out those coalition governments in the industrialized countries (OECD countries) experience higher budget deficits than one-party, majoritarian governments. It results from the difficulties of political management in coalition governments and it is worsened by the presence of many political parties in the ruling coalition.

Some studies suggest that instability and political polarization are negatively correlated with the public debt amount and budget deficits. Alesina and Tabellini (1990) observed that a public debt is positively affected by the degree of polarization between alternating governments. In the similar way, Grilli, Masciandaro and Tabellini (1991) measured a negative relationship between debt accumulation and the frequency of government changes in the OECD countries. Haan and Sturm (1994) have found the same results for countries of European Community in the 1980s.

A fairly wide stream of literature investigates situations, in which politicians attempt to ‘bribe’ voters in election years by extra government handouts. It is a theory of political budget cycle which states that we can expect higher budget deficits in the time of elections (see Person and

Tabellini (2002) and Shi and Svensson (2006)) especially for theory and Brender and Drazen (2005), Alt and Lassen (2006) or Hagen (2006) for empirical findings.

On the other hand, some studies focuses mainly on wider institutional determinants of budget deficits and debts. For example, Hagen (1992) argue that budgeting procedures and fiscal rules should have important consequences for the sustainability of fiscal policy. Hagen (1992) examines European Community (EC) countries using 1970s and 1980s fiscal data and expert characterizations of budgeting procedures. He observed that long-term fiscal constraints have positive role in achieving fiscal discipline, although the results were not sufficiently statistically significant. Significant effects of fiscal rules on fiscal discipline have been however found by many more recent studies (see e.g. Debrun et al. (2008) or Hagen (2006)).

### 3. Data and Methodology

This section will first describe the data used for the estimation, then postulate the empirical model and finally discuss the details of the estimation methodology.

#### 3.1 Data

We use an unbalanced cross-country time series data set, comprising all 28 EU countries over the period 1995-2016. Our final sample consists of 616 observations that almost all have data on government fiscal budget balance and elections, but may have missing values for other variables. An autoregressive (dynamic) panel model is employed, including a number of economic, social and political variables.

Data are obtained from the World Bank (WB), Eurostat and the International Monetary Fund (IMF) as well as from the Database of Political Institutions (see Cruz, Keefer and Scartascini, 2016), Comparative Political Data Set 1960-2014 (Armingeon et al., 2016) and Fiscal Rules database (European Commission, 2017).

#### 3.2 Regression Model

We use a dynamic panel data framework to test theoretical assumptions of determinants of government budget deficits. First, we use basic empirical model similar to that of Barro (1979) and then we modify it in line with the assumptions of the new political economy. We can specify our baseline model as follows:

$$DEF_{it} = \alpha DEF_{it-1} + \beta \Delta GDP_{it} + \gamma ASYM \Delta GDP_{it} + \delta X'_{it} + \mu_i + \varepsilon_{it} \quad (1)$$

where  $DEF_{it}$  is the dependent variable, the budget deficit to GDP ratio,  $\Delta GDP$  is percentage change in GDP,  $ASYM \Delta GDP_{it}$  is asymmetrical fiscal response to a negative output gap,  $X'_{it}$  is a row vector of economic control variables,  $\mu_i$  captures unobserved country-specific effects and  $\varepsilon_{it}$  is the error term. The vector of economic control variables contains  $X'_{it} = (\Delta YIELD_{it-1}, INFL_{it})$ , where  $\Delta YIELD_{it-1}$  is lagged change of government bond yields with 10 years' maturity and  $INFL_{it}$  is inflation rate for given year, defined as percentage change in the price level from the previous year.

A percentage change in GDP,  $\Delta GDP_{it}$ , measures the fiscal responsiveness to macroeconomic conditions. The variable operates mainly through automatic stabilizers. In a recession, a counter-cyclical fiscal policy is automatically performed through increasing unemployment-related expenditures and decreasing tax revenues (vice versa in a boom). However, the variable can capture additional effects that arise from discretionary fiscal policy as well. Tujula and

Wolswijk (2007) point out that literature considers possible asymmetries in fiscal responses to recessions and upturns (see e.g. Mayes and Virén, 2000). Governments often pursue expansionary policy in recessions, but in economic upswings, they use the cyclical budgetary surpluses for cutting taxes or increasing spending rather than for reducing deficits. For that reason we control asymmetrical fiscal response to a negative output gap by  $ASYM\Delta GDP_{it}$ .

A variable  $\Delta YIELD_{it-1}$  is included in the original paper by Barro (1979) and in many others (sometimes in various variations as the change in debt-servicing costs or spread of country's sovereign debt bonds), see e.g. Alessina and Hausmann et al. (1999) or Volkerink and Haan (2000). The variable is lagged change of government bond yields with 10 years' maturity and we expect that higher interest rates worsens fiscal stance of current government via increasing debt-servicing costs. On the contrary, higher interest rates on government bonds can lead to the signalling behaviour of the government in an effort to stabilize fiscal balance and to reduce yields from bonds. In conclusion, we are a priori unsure which of the effects prevails.

An expected inflation  $INFL_{it}$ , is another variable included by Barro (1979) and some of the recent studies (Maltritz and Wüste, 2015 or Tujula and Wolswijk, 2007). Tujula and Wolswijk (2007) state that inflation can have an automatic effect on government receipts and expenditures through nominal progression in tax rates and tax brackets as well as through price-devaluation of government expenditures. On the contrary, if we conclude about expected inflation, higher expected inflation erodes the real value of nominal government debt and it can lead to excessive government deficits in the present. Therefore, the overall effect of inflation on budget balance is not a priori clear.

Now, we can specify our enlarged model in line with the findings of the new political economy:

$$DEF_{it} = \alpha DEF_{it-1} + \beta \Delta GDP_{it} + \gamma ASYM\Delta GDP_{it} + \delta X'_{it} + \theta W'_{it} + \vartheta Z'_{it} + \mu_i + \varepsilon_{it} \quad (2)$$

where  $W'_{it}$  is a row vector of institutional and social variables defined as  $W'_{it} = (DEP_{it} RULE_{it})$  and  $Z'_{it}$  is a row vector of political variables  $Z'_{it} = (IDEO_{it} ELE_{it})$ .

A variable  $DEP_{it}$  denotes old-age-dependency ratio defined as number of persons aged 65 and over and the number of persons aged between 15 and 64. A higher  $DEP_{it}$  is expected to lead to a lower budget balance, i.e. a negative sign is predicted. It is largely used to control generational burden on public budgets (see Klomp and Haan, 2013 or Ademmer, Dreher, 2016).

Another explanatory variable,  $RULE_{it}$ , is included to control institutional constraints imposed on fiscal policy. It is Fiscal Rule Index published by European Commission and reflects the strength of the fiscal rules in the European countries. A higher index means better and stronger fiscal rules, so we expect positive relationship with the budget balance. The influence of fiscal rules on fiscal policy is a widely discussed and analyzed topic in political economy (see e.g. Debrun et al. (2008) or Hagen (2006)).

Variables  $IDEO_{it}$  and  $ELE_{it}$  are basic political variables which are commonly used in many studies on political determinants of fiscal policy (see e.g. Roubini and Sachs (1989a) or Shi and Svensson (2006) and discussion in Section 2). The variable  $IDEO_{it}$  denotes dummy variable, which equals 1 if the current government is left-wing and 0 otherwise. Finally, the variable  $ELE_{it}$  denotes the year in which the government gets elected. It equals 1 if an election takes place and 0 otherwise. We hypothesize that left-wing governments produce higher budget deficits (negative relationship) and that budget deficits are higher in the time of elections (negative relationship).

### 3.2 Methodology

We can expect that unobserved country-specific effects ( $\mu_i$ ) (see equations 1 and 2) are different across countries, meaning that the simple OLS estimator would be biased. This is the case because the vector of the lagged dependent variable  $Y_{i,t-1}$  is endogenous to these country-specific effects (violation of the assumption of orthogonality, for more see e.g. Roodman, 2006). Most empirical studies therefore employ Fixed Effects (FE) in order to allow for cross-country differences. However, the commonly used Within Groups (WG) estimator is problematic as well, especially if the number of periods is low. It is well documented that the WG estimator does not eliminate the dynamic panel bias that is in the order of  $1/T$  (Nickell, 1981; Kiviet, 1995).

For that reason we use Blundell and Bond (1998) estimator (or System GMM estimator), which is based on the Arellano and Bond (1991) estimator (or FD GMM estimator) and uses the Generalized Method of Moments (GMM) with Instrumental Variables (IV). The Arellano and Bond (1991) estimator uses the lagged levels of the dependent variable as instruments for equations in first differences. On the other hand, Blundell and Bond (1998) use a system of equations where lagged differences of dependent variable are instruments for the equation in levels, in addition to the lagged levels used as instruments for equations in first differences. It is important to note that the System GMM estimator does not magnifies gaps in unbalanced panels as FD GMM do. Moreover, it is asymptotically more efficient which is why the former is our preferred specification.

In order to alleviate some known problems within the GMM approach, we use a two-step GMM estimator, which is robust to panel-specific autocorrelation and heteroscedasticity. To avoid the fact that its standard errors are downward biased in small samples, we use Windmeijer (2005) finite-sample correction, which yields a finite-sample corrected two-step covariance matrix. A second common issue is a problem of too many instruments (see Roodman, 2009), which can make some asymptotic results of the GMM estimators and the related specification tests misleading. To mitigate this problem we use only a subset of the available instrument matrix.

We test the validity of the instrumental variables in two ways. First, we examine the second order serial correlation of differenced residuals (AR2), as proposed by Arellano and Bond (1991). If the null hypothesis of the test (no serial correlation) is not rejected, we can treat the instrumental variables as valid. Second, we test the validity of all orthogonality conditions for the overidentified model by the Hansen (1982) test. This test verifies the validity (exogeneity) of instruments' subsets and it is preferable for the two-step estimation. We test null hypothesis that residuals are uncorrelated with instruments. If the hypothesis is not rejected, we can treat the instruments as orthogonal.

## 4. Results and Discussion

This section presents our empirical results regarding determinants of the budget deficits in the EU countries in 1995-2016. We present and discuss results of the baseline model in the first part of this section. In the second part, we describe empirical findings on the empirical model of political economy, which includes political and institutional variables.

#### 4.1 Baseline Model

Table 1 in the Appendix reports the results of baseline model (tax smoothing model, M1) in the period 1995-2016 for 27 countries of the European Union.<sup>7</sup> The second column features results of our preferred specification, namely system GMM estimation (two-step Blundell-Bond procedure) using the Windmeijer (2005) finite-sample correction.

The coefficient of the lagged dependent variable,  $DEF_{it-1}$ , is relatively large and statistically significant in this specification (and in all others) indicating significant persistence over time. Most interesting of all are the fiscal policy responses to the business cycle. The coefficient on a variable  $\Delta GDP$  is an elasticity of the balance of the government budget. It is a percentage change in the budget balance GDP ratio in response to a one-percentage point increase in the GDP. Given that we control an asymmetrical fiscal response to a negative output gap by  $ASYM\Delta GDP_{it}$ , the coefficient on  $\Delta GDP$  is in fact a reaction of the budget balance to a positive output gap. Overall response of the budget balance to changes in GDP, regardless of the positive/negative output gap is therefore approximately 0.247. A statistically significant and positive response means that overall budget balances had a stabilizing role in the examined period. The overall elasticity reported is comparable with Virén (2000) study, which concludes values ranging 0.2-0.3 for EU countries. It is slightly higher than Tujula and Wolswijk (2007) measured in the 22 OECD countries in 1970-2002 (roughly 0.15) and almost the same as Alesina, Campante and Tabellini (2008) reported for OECD countries during 1960-1999 (0.261).

Large positive reaction displayed in the coefficient  $ASYM\Delta GDP_{it}$  (0.174) shows that deficit elasticity in recessions is considerably higher than in the economic upswings (these two elasticities significantly differ). The higher response reflects that automatic stabilizers play more important role in the time of recessions. If  $\Delta GDP$  decrease by 1 percentage point, budget balance decrease by 0.34 (0.17 + 0.17) in the case of recession and only about 0.17 in the case of economic upturn (positive output gap). A fiscal policy seems to be more counter-cyclical in the recession for that reason. On the contrary, there are probably more pro-cyclical policies in the economic upturns – the GDP is increasing and governments can spend more (they work against automatic stabilization) and it reduces the measured elasticity.

Fiscal policy in the European countries however reacts to a current inflation and lagged yields from government bonds as well. The coefficient on the  $INFL_{it}$  is negative which can signify that governments expect government debts to be eroded by higher inflation and therefore promote excessive deficits. On the other hand, we can observe stabilizing reactions to the increasing lagged change of government bond yields ( $\Delta YIELD_{it-1}$ ). A higher interest rate in the previous period seems to push governments to improve a fiscal position through the reducing deficits. Our findings on  $\Delta YIELD_{it-1}$  are in line with findings of Volkerink and Haan (2000) who found the stabilizing reaction of fiscal policy to the higher interest payments from the government debts. On the other hand, our results are inconsistent with studies Alessina and Hausmann et al. (1999) or Alesina, Campante and Tabellini (2008) which investigated similar debt-costs variables.

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<sup>7</sup> Estonia is not included because it did not use an active monetary policy in the examined period (Estonia operated with the currency board system) which has resulted in modest issuance of government bonds. Estonian data on the long-term interest rates are therefore rather problematic. Estonia will be included in the adjusted political economy model in the next chapter.

The reported Hansen test of overidentifying restrictions and the Arellano-Bond test for second order serial correlation of the differenced residuals both have expected p-values (the null hypotheses are not rejected), see Table 1.

In sum, Barro's (1979) tax smoothing model does not seem to explain the behavior of fiscal policies in the EU quite well. Fiscal policy seems to play a stabilizing role, but the budget elasticity is much higher in the recessions. The question is, whether the results will hold even if we enlarge the baseline model by adding new "political-economy" variables.

#### 4.2 Political Economy Model

Table 2 in the Appendix reports the results of enlarged (political economy model, M2) in the period 1995-2016. We can observe that our results regarding the counter-cyclicality of the European fiscal policies remain quite stable, whereas the inflation and yields from the government bonds no longer seem to be significant factors of the budget deficits. These findings are consistent with the related literature on the political economy models of fiscal deficits (see e.g. Tujula and Wolswijk, 2007).

The coefficients on the political and institutional variables are in line with our expectations, although some of them are statistically insignificant. The levels of the government budget balances are negatively influenced by a higher old-age dependency ratio, whereas stronger fiscal rules have positive impact. Moreover, political variable  $IDEO_{it}$  shows that left-wing governments tend to record higher deficits. These results are generally consistent with studies cited above, although negative and statistically significant impact of left-wing governments to the budget balance is rather an exception in the related studies (see e.g. Alesina, Roubini and Cohen, 1997 or Perotti and Kontopoulos, 2002). On the other hand, elections do not seem to be a statistically significant determinant of the higher budget deficits (there is a correct sign at the coefficient  $ELE_{it}$ , but statistically insignificant).

In order to include all countries of the European Union we exclude variable  $\Delta YIELD_{it-1}$  from the regression in the third column (model M3). This variable showed to be statistically insignificant and prevented inclusion of Estonia. Moreover, it contains many gaps, which significantly reduces the number of observations. Generally, the results are not substantially different, except for dummy variable on elections,  $ELE_{it}$ , which is now statistically significant. The coefficient takes value -0.37 which is in line with previous studies on the political-budget cycle in the developed countries, see e.g. Mink and Haan (2006) for results from euro area.

Last column of Table 2 reports the results of the political economy model including the dummy for controlling recent economic crisis (model M4). The dummy takes 1 in the period 2008-2009 and 0 otherwise. Despite the fact that we control economic fluctuations via variables  $\Delta GDP_{it}$  and  $ASYM\Delta GDP_{it}$ , an adjustment for that specific period can give us additional insights. Again, the results only slightly differ from previous models (signs and statistical significance remain the same, although coefficients differ slightly in size), except asymmetrical fiscal response to a negative output gap,  $ASYM\Delta GDP_{it}$ . The coefficient is not statistically significant (although positive) which means that the fiscal policy reactions do not differ in the situation of the positive and negative output gap. These results are rather expectable and we will discuss them in the conclusions (Section 4).

Finally, let us add that the political-budget cycle dummy variable,  $ELE_{it}$ , is still statistically significant in our last specification (M4) which confirms the results of inclusion of all countries and the majority of observations in the model M3.



## 4. Conclusion

In order to answer the question of the role of the fiscal policy in the European Union, we tested panel data consisting from data on all 28 countries in the 1995-2006. Since the FD-GMM estimator has been found to have large finite sample bias and poor precisions when the time series are persistent, we employed the system GMM estimator by Blundell and Bond (1998) in our study.

First, we empirically tested the theoretical model which is based on the Barro (1979) approach. Results of this baseline regression gave us rather preliminary insight into the examined problem. We could observe asymmetric fiscal response to the negative output gap in the EU countries which is in contradiction with Barro's expectations. European fiscal policies seemed to play a stabilizing role, but especially in the recessions. Moreover, we found out stabilizing reactions of the fiscal policy to the increasing yields from government bonds. Second, political and institutional variables appeared to be important determinants of fiscal deficits in the enlarged political economy model.

What is interesting, statistical significance of the asymmetrical fiscal response disappeared after the inclusion of the dummy for crisis. It is probably due to the fact that we practically "excluded" 56 observations where the fiscal policy reacted the most counter-cyclically in the situation of the negative output gap across the European countries. For that reason, it seems to be crucial for the next analysis to divide examined period into the two – pre-crisis and post-crisis period. We can probably expect important variations in the fiscal policy reactions before crisis and after crisis. It regards even the included political variables. We can hypothesize that the political economy model could be more suitable for explaining fiscal policy reactions before GFC, whereas after the crisis the tax smoothing model could take its place. The after-crisis period is probably full of threats and sailing between the Scylla and Charybdis is probably more demanding. We can also hypothesize that political budget cycles differ across the countries and that they are probably more pronounced before crisis than after the crisis. Above-mentioned problems are probably the most serious limits of our analysis and should be solved in the forthcoming paper.

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## References

- [1] Ademmer, E. and Dreher, F. (2016). Constraining Political Budget Cycles: Media Strength and Fiscal Institutions in the Enlarged EU. *JCMS: Journal of Common Market Studies*, vol. 54, iss. 3, pp. 508-524.
- [2] Alesina, A. and Hausmann, R. et al. (1999). Budget Institutions and Fiscal Performance in Latin America. *Journal of development Economics*, vol. 59, iss. 2, pp. 253-273.
- [3] Alesina, A., Campante, F. and Tabellini, G. (2008). Why is Fiscal Policy Often Procyclical? *Journal of the European Economic Association*, vol. 6, iss. 5, pp. 1006-1036.

- [4] Alesina, A., Roubini, N. and Cohen, G. (1997). *Political Cycles and the Macroeconomy*. Cambridge, MA: MIT Press.
- [5] Alesina, A. and Tabellini, G. (1990). A Positive Theory of Fiscal Deficits and Government Debt. *The Review of Economic Studies*, vol. 57, iss. 3, pp. 403-414.
- [6] Alt, J. and Lassen, D. (2006). Transparency, Political Polarization, and Political Budget Cycles in OECD Countries. *American Journal of Political Science*, vol. 50, iss. 3, pp. 530-550.
- [7] Arellano, M. and Bond, S. (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *The Review of Economic Studies*, vol. 58, iss. 2, pp. 277-297.
- [8] Armingeon, K. et al. (2016). Comparative Political Data Set 1960-2014. Bern: Institute of Political Science, University of Berne.
- [9] Barro, R. J. (1979). On the Determination of the Public Debt. *Journal of Political Economy*, vol. 87, iss. 5, pp. 940-971.
- [10] Blundell, R. and Bond, S. (1998). Initial Conditions and Moment Restrictions in Dynamic Panel Data Models. *Journal of Econometrics*, vol. 87, iss. 1, pp. 115-143.
- [11] Brender, A. and Drazen, A. (2005) Political Budget Cycles in New Versus Established Democracies. *Journal of Monetary Economics*, vol. 52, iss. 7, pp. 1271-1295.
- [12] Cruz, C., Keefer, P. and Scartascini, C. (2016). The Database of Political Institutions 2015 (DPI2015).
- [13] Debrun, X. et al. (2008). Tied to the Mast? National Fiscal Rules in the European Union. *Economic Policy*, vol. 23, iss. 54, pp. 298-362.
- [14] Drazen, A. (2002). *Political Economy in Macroeconomics*. New Jersey: Princeton University Press.
- [15] European Commission (2017). *Fiscal Rules Database, Old Methodology*. [online]. [2017-08-12]. Available at: [https://ec.europa.eu/info/publications/fiscal-rules-database\\_en](https://ec.europa.eu/info/publications/fiscal-rules-database_en)
- [16] Frey, B. and Schneider, F. (1978). An Empirical Study of Politico-Economic Interaction in the U.S. *Working Paper*. Konstanz: Universität Konstanz.
- [17] Grilli, V., Masciandaro, D. and Tabellini, G. (1991). Political and Monetary Institutions and Public Financial Policies in the Industrial Countries. *Economic Policy*, vol. 6, iss. 13, pp. 341-392.
- [18] Haan, J. and Sturm, J. (1994). Political and Institutional Determinants of Fiscal Policy in the European Community. *Public Choice*, vol. 80, iss. 1-2, pp. 157-172.
- [19] Hansen, L. P. (1982). Large Sample Properties of Generalized Method of Moments Estimators. *Econometrica*, vol. 50, iss. 4, pp. 1029-1054.
- [20] Hagen, J. (2006). Fiscal Rules and Fiscal Performance in the EU and Japan. *CEPR Discussion Paper No. 5330*. Bonn: Institut für Internationale Wirtschaftspolitik, University of Bonn.
- [21] Hagen, J. (1992). Budgeting Procedures and Fiscal Performance in the European Communities. *Economic papers*, vol. 96, pp. 1-79.

- [22] Hibbs, D. (1997). Political Parties and Macroeconomic Policy. *The American Political Science Review*, vol. 71, iss. 4, pp. 1467-1487.
- [23] IMF (2017). *World Economic Outlook Database*. [online]. [2017-08-12]. Available at: [www.imf.org/en/Data](http://www.imf.org/en/Data)
- [24] Kiviet, J. F. (1995). On Bias, Inconsistency, and Efficiency of Various Estimators in Dynamic Panel Data Models. *Journal of Econometrics*, vol. 68, pp. 53-78.
- [25] Klomp, J. and Haan, J. (2013). Do Political Budget Cycles Really Exist?. *Applied Economics*, vol. 45, iss. 3, pp. 329-341.
- [26] Malritz, D. and Wüste, S. (2015) Determinants of Budget Deficits in Europe: The Role and Relations of Fiscal Rules, Fiscal Councils, Creative Accounting and the Euro. *Economic Modelling*, vol. 48, pp. 222-236.
- [27] Mayes, D. G and Virén, M. (2000). The Exchange Rate and Monetary Conditions in the Euro Area. *Review of World Economics*, vol. 136, iss. 2, pp. 199-231.
- [28] Mink, M. and Haan, J. (2006). Are There Political Budget Cycles in the Euro Area? *European Union Politics*, vol. 7, iss. 2, pp. 191-211.
- [29] Nickell, S. (1981). Biases in Dynamic Models with Fixed Effects. *Econometrica*, vol. 49, iss. 6, pp. 1417-1426.
- [30] Perotti, R. and Kontopoulos, Y. (2002). Fragmented Fiscal Policy. *Journal of Public Economics*, vol. 86, iss. 2, pp. 191-222.
- [31] Persson, T. and Tabellini, G. (2002). Do Electoral Cycles Differ Across Political Systems? *Working Paper No. 232*. Bocconi University.
- [32] Persson, T. and Tabellini, G. (2000). *Political Economics: Explaining Economic Policy*. Cambridge: The MIT Press.
- [33] Roodman, D. (2006). How to Do Xtabond2: An Introduction to “Difference” and “System” GMM in Stata. *Working Paper Number 103*.
- [34] Roubini, N. and Sachs, J. (1989a). Government Spending and Budget Deficits in the Industrial Countries. *Economic Policy*, vol. 8, pp. 99-132
- [35] Roubini, N. and Sachs, J. (1989b). Political and Economic Determinants of Budget Deficits in the Industrial Democracies. *European Economic Review*, vol. 33, pp. 903-938.
- [36] Shi, M. and Svensson, J. (2006). Political Budget Cycles: Do They Differ Across Countries and Why? *Journal of Public Economics*, vol. 90, iss. 8-9, pp. 1367-1389.
- [37] Tujula, M. and Wolswijk, G. (2007). Budget Balances in OECD Countries: What Makes Them Change? *Empirica*, vol. 34, iss. 1, pp. 1-14.
- [38] Virén, M. (2000). How Sensitive is the Public Budget Balance to Cyclical Fluctuations in the EU? *VATT- Discussion Papers, No. 230*.
- [39] Volkerink, B. and Haan, J. (2000). Fragmented Government Effects on Fiscal Policy: New Evidence. *Public Choice*, vol. 109, iss. 3, pp. 221-242.
- [40] Windmeijer, F. (2005). A Finite Sample Correction for the Variance of Linear Efficient Two-Step GMM Estimators. *Journal of Econometrics*, vol. 126, iss. 1, pp. 25-51.

## Appendix

**Table 1: Baseline model (EU countries, 1995-2016)**

two-step sys.GMM (robust SE)	
DEF	Coef. (z-stat)
	M1
DEF(-1)	0.743*** (16.31)
$\Delta$ GDP	0.174*** (3.67)
ASYM $\Delta$ GDP	0.171*** (3.12)
INFL	-0.207*** (-4.79)
$\Delta$ YIELD(-1)	0.177*** (3.5)
Hansen test	25,83 [0.934]
AB test	-0.10 [0.920]
No. observ.	457
No. countries	27

Columns report estimated coefficients with the z-statistics in brackets. \*\*\*, \*\*, \* denote significance at the 99%, 95%, and 90% levels, respectively. The instruments used in the system GMM regression are lagged levels (two periods) of the dependent variable for the differenced equation, and lagged difference (one period) for the level equation. The exogenous covariates and electoral dummies are instrumented by themselves in the differenced and level equations. This also applies to all other regressions.

Source: author's calculations

**Table 2: Political Economy models (EU countries, 1995-2016)**

two-step sys.GMM (robust SE)				
DEF	Coef. (z-stat)			
	M2	M3	M4	
DEF(-1)	0.652*** (11.19)	0.631*** (12.04)	0.667*** (10.26)	
$\Delta$ GDP	0.243*** (4.76)	0.209*** (5.62)	0.174*** (3.97)	
ASYM $\Delta$ GDP	0.129** (2.4)	0.095* (1.76)	0.032 (0.55)	
INFL	0,014 (0.16)	0,004 (0.64)	0,004 (0.74)	
$\Delta$ YIELD(-1)	0,118 (1.62)			
DEP	-0.049*** (-3.03)	-0.053*** (-5.32)	-0.036*** (-3.32)	
RULE	0.366** (2.33)	0.415*** (3.43)	0.376*** (3.03)	
ELE	-0,245 (-1.00)	-0.373** (-2.01)	-0.402* (-1.88)	
IDEO	-0.586* (-1.86)	-0.437** (-1.97)	-0.355* (-1.87)	
CRISIS			-1.578* (-1.91)	
Hansen test	23,69 [0.966]	21,82 [0.988]	20,1 [0.995]	
AB test	0.33 [0.741]	-0.14 [0.885]	0,19 [0.852]	
No. observ.	457	577	577	
No. countries	27	28	28	

Source: author's calculations

## **Economic Aspects of Firefighting Vehicles Safe Driving Within EU Civil Protection**

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### **Abstract**

*One of the security forces is the Fire Rescue Service of the Czech Republic. Its primary task is to protect lives and health of the population in particular from fires and other emergency and critical situations. FRS CR is involved in providing security of both the population of the Czech Republic, and of other countries of the European Union, in the form of special emergency response teams (Urban Search and Rescue - USAR) sent abroad. These USAR teams are registered in the CECIS (Common Emergency Communication and Information System) international database of the European Union. While performing these public services members of the FRS CR need special fire appliances. The first-response group of firefighting appliances is professionally denominated as firefighting vehicles. Traffic accidents occur occasionally while driving to emergency. Costs connected with these accidents adversely affect the economy of transport and, above all, threaten the operational capacity of fire units. The paper summarizes results of the analysis of the most numerous group of emergency vehicles – water tenders. One of the analysis objectives was to estimate the profile of the driver-fireman who caused the traffic accident.*

**Keywords:** estimation, EU civil protection, fire fighting vehicles, public services, traffic accident, transportation economic, Urban Search and Rescue teams - USAR

**JEL Classification:** C13, H41, R41

### **1. Introduction**

Contemporary human society is extremely interconnected, therefore natural disasters, fires or industrial accidents have an impact on much more people than in the past. The Fire Rescue Service of the Czech Republic (FRS CR) has the task to eliminate consequences of these incidents and help where necessary. As a member country of the European Union, the Czech Republic provides humanitarian assistance also to recipients abroad by sending abroad special emergency response teams - Urban Search and Rescue teams (USAR teams). As defined in Article 21, paragraph 2. g) of the Consolidated versions of the Treaty on European Union and the Treaty on the functioning of the European Union (European Union, 2010), “The Union

shall define and pursue common policies and actions, and shall work for a high degree of cooperation in all fields of international relations, in order to: ... assist populations, countries and regions confronting natural or man-made disasters.” The forms of humanitarian aid can be broadly divided into rescue, material, financial, advisory and combined assistance. The FRS CR has established special brigades - USAR teams - to provide rescue humanitarian assistance abroad. These USAR teams are registered in the CECIS - Common Emergency Communication and Information System international database of the European Union (USAR, 2017). USAR teams created within the FRS CR are prepared for search and rescue activity in collapsed buildings, managing fires, flood rescue work and interventions in chemical and environmental accidents. USAR teams and/or fire brigades need firefighting vehicles for providing this assistance.

Traffic accidents also occur while driving fire trucks, just as it happens to other road users. Dittmar (2005) stated that the traffic accidents while emergency driving were the second most frequent cause of firefighters’ tragic death in the USA. Čemerková et al. (2014) performed the analysis of traffic accidents in the Czech Republic and the Slovak Republic in the years 2001 - 2011. The most important factor in the road accidents with injuries and deaths in the Czech Republic was the length of motorways, according to their findings. The number of accidents declined with increasing length of motorways. Mesjasz-Lech (2016) described the sustainability of transport in Poland. The author established three kinds of indexes within this study, among which the social index was the first one. This index contained, among other factors, the number of persons killed in road accidents per 1,000,000 citizens. In 2013 within the EU-rated countries, Austria had the lowest index (1), the index for the Czech Republic was 7, while the Netherlands had the worst value of the index (14).

Because fatal accidents occur at FRS CR while emergency drives likewise (there were 1 firefighter’s death referred in FRS CR traffic accident statistics, both in 2015, and 2016, moreover 2 firefighters were killed during emergency rides in 2017), we decided to deal with the traffic accidents of firefighting vehicles, especially water tenders, while emergency driving.

## 2. Problem Formulation

The Police of the Czech Republic evaluate traffic accidents every year in their statistics. The latest published data evaluation is summarized in the document "Road Accident Report of the Czech Republic in 2016" (Police Presidium of the Czech Republic, 2017). The total number of investigated accidents was 98,864 and the material damage reached CZK 5,804 million in 2016. These numbers are high compared to some other EU countries.

For the comparison, there were 13,522 accidents in the Slovak Republic with a total damage of approximately CZK 1,110 million in the same period. Traffic accident statistics per capita are much worse in the Czech Republic. The number of accidents per 1 million inhabitants was 9,415 in the Czech Republic, while in the Slovak Republic it was 2,704 accidents, which is more than three times less.

We have focused on the following characteristics of traffic accidents in the CR when studying this document, and used them for our analysis.

*Main causes of traffic accidents.* Incorrect driving (54,961 traffic accidents), not giving way (14,771 traffic accidents) and speeding (14,283 traffic accidents) were the most common causes of traffic accidents caused by drivers.

*Length of driving experience.* The wrong way of driving (14,363 traffic accidents), speeding (7,170 traffic accidents), and not giving way (4,946 traffic accidents) were the main causes of traffic accidents caused by drivers with the experience up to 10 years. Traffic accidents mainly caused by the incorrect way of driving (16,286 traffic accidents), not giving way (5,971 traffic accidents) and speeding (4,860 traffic accidents) occurred in the group of drivers with the experience longer than 10 years.

*Age of the driver who committed the traffic accident.* The following numbers were recorded: 14,324 traffic accidents occurred in the age group of 21 - 29 years, drivers aged 30 - 39 caused 14,027 traffic accidents, drivers aged 40 - 49 caused 13,291 traffic accidents, and 8,968 traffic accidents occurred in the age group 50 - 59 years.

Two hypotheses have been formulated according to the above findings, before starting the accident analysis at FRS CR. The first hypothesis claims: Incorrect way of driving is the most common cause of traffic accidents. The second one predicts: Drivers under the age of 30 cause the majority of traffic accidents.

### 3. Methodology

Every year, the Ministry of the Interior - General Directorate of the Fire Rescue Service of the Czech Republic compiles traffic accident statistics. Results of this analysis are published by the Ministry in official documents, for example in Šnely (2011). The aim of the analysis is to compare the trend of traffic accidents at FRS CR units in the given year with previous years and to inform about the state of traffic accidents all units of fire protection. The statistics mentioned above evaluate and summarize overall results for the given year. However, these texts cannot capture all details on their approximately 30 pages. Our analysis is focused on these selected details. Individual reports of firefighting vehicles traffic accidents sent to the General Directorate of the FRS CR by mechanical service technicians from the regions, territorial departments and individual stations as required by the Machine Services Order (Fire Rescue Service of the Czech Republic, 2006) were a source of input data for our analysis. Before the beginning of the analysis, we decided to focus on the following criteria:

1. The traffic accident character – accident caused by firemen.
2. The purpose of the ride – emergency ride.
3. The type of fire appliance – water tender.

Primary records of traffic accidents from the "Fire Traffic Accident Report" form, which were collected centrally at the General Directorate of the FRS CR, were processed in MS Excel. These data were processed thereafter while using the same software by the authors. Elementary filtering functions in MS Excel were primarily used according to the above mentioned criteria. Specific traffic accidents records were studied in cases of unclear recorded data. The focus of the analysis on water tender vehicles was based on the following generally known facts. Water tenders are vehicles that run as the first-response vehicles in the emergency event. They are going to operate with the switched on warning lights as vehicles with the right of way. Thus, they do not have to follow certain traffic rules while emergency driving. Their drivers go on the edge of motor vehicle dynamics. These vehicles have the largest annual mileage of all types of firefighting vehicles. Acquisition value of water tenders always exceeds the purchase price of FRS CR other trucks. Solely special appliances are more expensive than water tenders, such as aerial ladders and hydraulic platforms. The frequency of accidents also corresponds to the fire vehicles structure. E.g., in 2015, the highest frequency of traffic accidents by the type of fire appliances was following: water tenders - 67 traffic accidents (41 %), passenger cars - 29 traffic accidents (18 %), command cars - 16 traffic accidents (10 %) of the total number

163 traffic accidents happened to all types of vehicles at FRS CR in the given year. Traffic accident analysis was carried out pursuant to statistics of 2011 to 2016. During this period, 58 traffic accidents were analyzed.

#### 4. Problem Solution

Results of the analysis of traffic accident statistics according to the above criteria are shown in the following tables. Causes of accidents, amounts of damages, the month in which an accident occurred, the driver's age and the driver's experience were evaluated for the recorded traffic accidents.

##### 4.1 Causes of Traffic Accidents

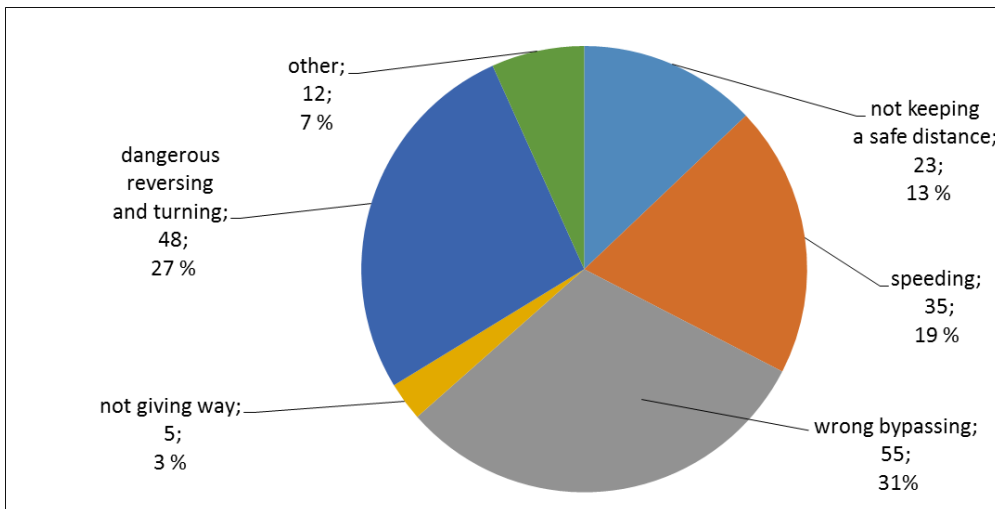
The initial steps in solving the task were focused on filtering traffic accidents by the cause. Table 1 summarizes all recorded causes of water tenders traffic accidents during emergency drives. Figure 1 shows the share of particular traffic accident cause over the period 2011 to 2016.

**Table 1: Causes of Traffic Accidents**

	2011	2012	2013	2014	2015	2016
<b>not keeping a safe distance</b>	4	6	5	2	3	3
<b>speeding</b>	5	3	8	9	6	4
<b>wrong bypassing</b>	5	6	11	13	10	10
<b>not giving way</b>	1	0	0	1	1	2
<b>dangerous reversing and turning</b>	9	8	11	6	6	8
<b>others</b>	2	0	3	5	1	1

Source: own research based upon data from General Directorate of the FRS CR (2011-2016)

**Figure 1: Shares of Particular Traffic Accident Cause, Years 2011 - 2016**



Source: own research based upon data from General Directorate of the FRS CR (2011-2016)



### 4.2 Damage Value at Traffic Accidents

The second step consisted in evaluating damages at firefighting vehicles. Table 2 summarizes the total damage on fire appliances and a surrounding area, i.e. on the roads and other traffic accident participants, during the given period.

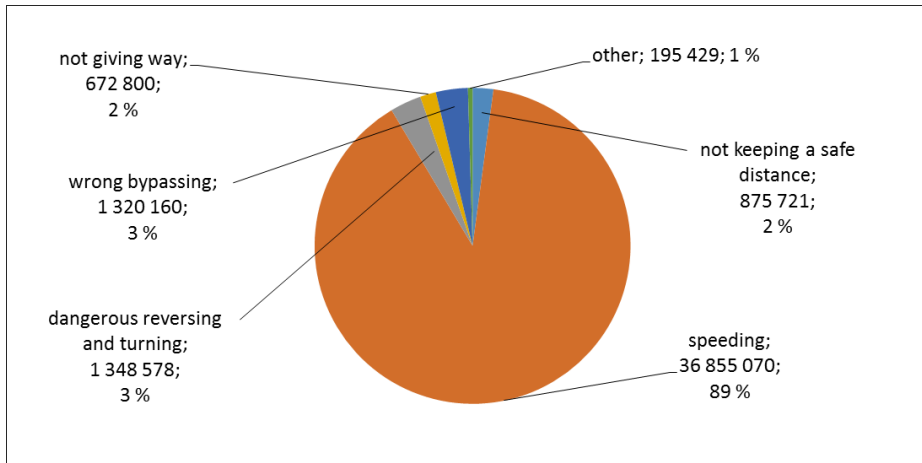
Figure 2 shows the share of particular cause of the total damage value arising during the monitored period 2011 - 2016. The graph shows the cause of traffic accident, the value of the damage and its percentage of the total amount of damage for the 2011 - 2016 period. Speeding has proven to be the most serious cause of traffic accidents in terms of the damage value that resulted from this analysis.

**Table 2: Total Damage According to the Traffic Accident Cause**

	2011	2012	2013	2014	2015	2016
<b>not keeping a safe distance</b>	38 000	318 921	380 300	13 000	15 500	110 000
<b>speeding</b>	1 110 000	4 562 000	3 417 000	13 218 910	13 915 160	632 000
<b>wrong bypassing</b>	49 000	146 000	708 000	159 000	102 500	155 660
<b>not giving way</b>	100 000	0	0	320 000	190 000	62 800
<b>dangerous reversing and turning</b>	169 000	177 802	253 500	170 000	202 776	375 500
<b>other</b>	34 300	0	20 000	133 129	8 000	0

Source: own research based upon data from General Directorate of the FRS CR (2011-2016)

**Figure 2: Total Damage Value According to the Traffic Accident Cause**



Source: own research based upon data from General Directorate of the FRS CR (2011-2016)

Damage to the environment was filtered out from total damage in the subsequent evaluation, so that the amount of damage arising on fire vehicles could be obtained only. The total damage for each year is summarized in Table 3.

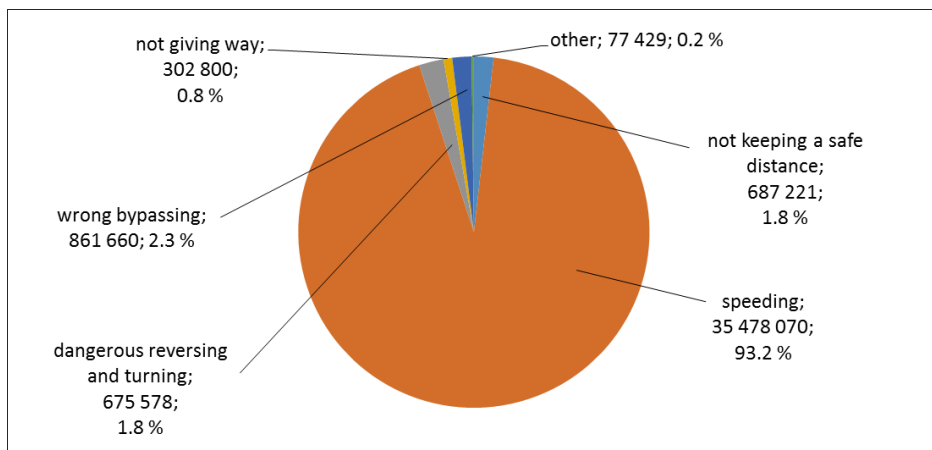
**Table 3: Damage to Firefighting Water Tenders by the Cause of Traffic Accident**

	2011	2012	2013	2014	2015	2016
not keeping a safe distance	38 000	278 921	315 300	0	5 000	50 000
speeding	1 110 000	4 500 000	3 266 000	12 703 910	13 458 160	440 000
wrong bypassing	49 000	28 000	650 000	20 000	34 000	80 660
not giving way	100 000	0	0	70 000	120 000	12 800
dangerous reversing and turning	169 000	59 802	68 500	25 000	77 776	275 500
others	34 300	0	0	43 129	0	0

Source: own research based upon data from General Directorate of the FRS CR (2011-2016)

In Figure 3, the overall share of individual causes of damage to firefighting vehicles is shown during the period 2011 - 2016. The damage to firefighting vehicles attained 92.3 %, while other environmental damage achieved only 7.7 %. Environmental damage was not recorded for its small share of total damage in the FRS CR statistics until 2011.

**Figure 3: Damage to Firefighting Vehicles by the Cause of Traffic Accident in 2011 – 2016**

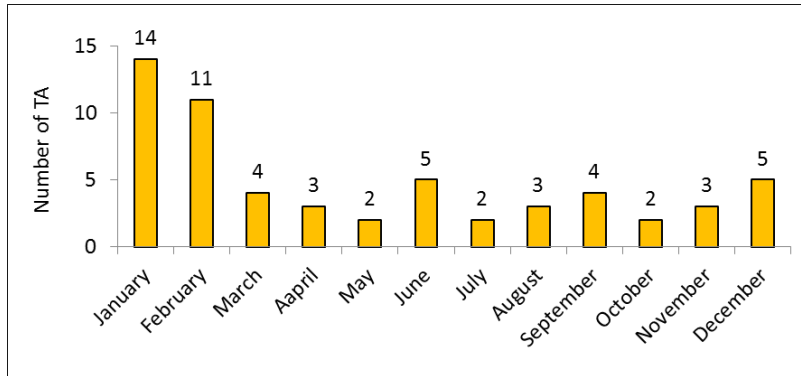


Source: own research based upon data from General Directorate of the FRS CR (2011-2016)

**4.3 Frequency of Traffic Accidents in a Particular Month of the Year**

The third part of the analysis aimed to identify the frequency of traffic accidents for the water tender vehicles in the particular month of the calendar year and to compare it with the total statistics of the FRS CR. The result of our analysis is graphically illustrated in Figure 4.

**Figure 4: Frequency of Traffic Accidents (TA) in a Particular Month, 2011 – 2016**



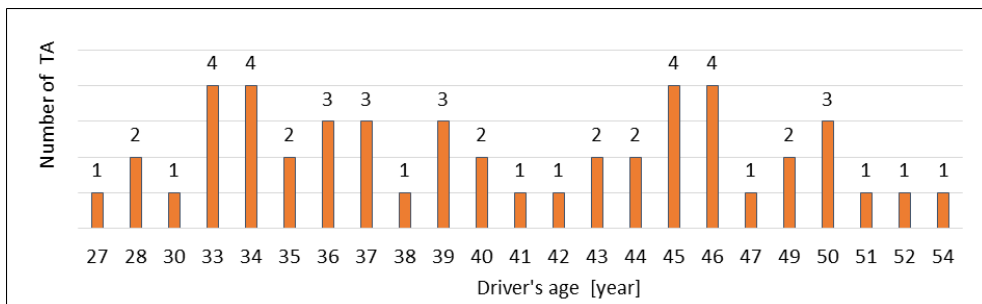
Source: own research based upon data from General Directorate of the FRS CR (2011-2016)

Our results show a different fact compared to data in FRS CR statistics, see e.g. the 2015 report (Ministry of the Interior of the Czech Republic, 2016). According to the overall statistics for the years 2000 to 2015 the largest average number of traffic accidents occurred in December, February and June. The average number of traffic accidents over these 16 years ranges from 9 to 13 traffic accidents per month. Peaks and troughs occur identically three times a year and the average number is 11 traffic accidents per month. Our research showed that the highest frequency of the traffic accidents of the monitored vehicles was in January and February. On the other hand, our findings show significant extremes in the monthly accidents numbers that need to be concentrated on in the preventive educational activity at FRS CR units.

**4.4 Drivers' Age**

The fourth part of the analysis focused on the age structure of the drivers who caused the traffic accident, and the length of their driving experience. As for the year 2011 was unable to trace traffic accident reports (paper forms were shredded), the analysis was made for the period 2012 - 2016 only. The total number of evaluated drivers who caused a traffic accident was 49. The distribution of traffic accidents according to the age of drivers who caused a traffic accident is shown in Figure 5. The highest level of traffic accidents was found in the age group from 33 to 37 years (16 accidents) and in the age group from 43 to 46 years (12 accidents).

**Figure 5: Distribution of Traffic Accidents (TA) according to the Drivers' Age**

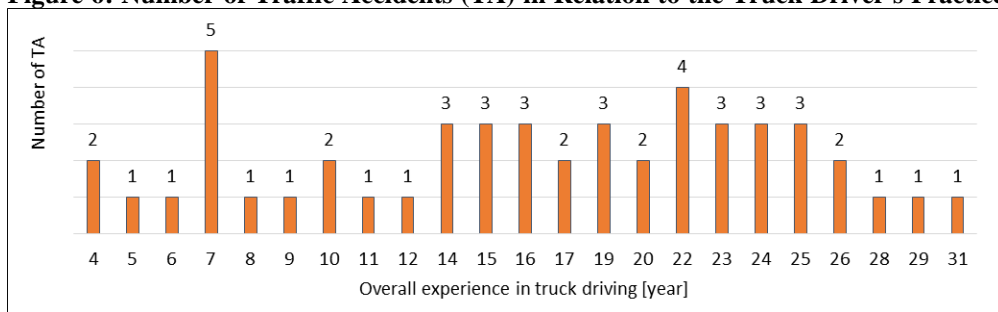


Source: own research based upon data from General Directorate of the FRS CR (2012-2016)

### 4.5 Length of Drivers' Experience

The last part of the analysis focused on the number of traffic accidents according to the length of the driving experience. The overall practice in driving was evaluated in these analyzes at first, the driving experience on firefighting vehicles at FRS CR was ascertained afterward. In Figure 6, the traffic accidents occurrence and the total length of the truck driver's practice are listed in the monitored period 2012-2016. Whereas two risky groups of drivers were profiled during the study of the drivers' age structure, the increase in traffic accidents number and a presumptive deterioration of driving skills was evident after 14 years of driving practice. The raise of accidents number continued until the 25th year of drivers' experience, thereafter numbers of traffic accidents diminished. The width of this interval (more than 11 years) could be the subject of further more detailed analysis.

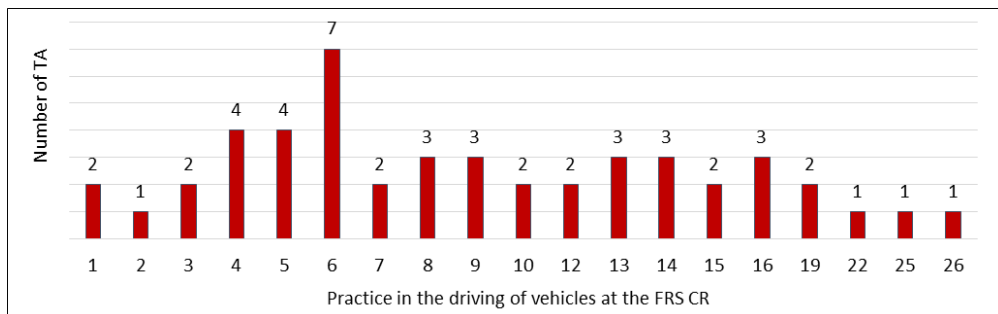
**Figure 6: Number of Traffic Accidents (TA) in Relation to the Truck Driver's Practice**



Source: own research based upon data from General Directorate of the FRS CR (2012-2016)

During the second part of the analysis we focused on the distribution of traffic accidents according to the length of the driver's practice achieved in driving firefighting vehicles at FRS CR units. Results of the analysis for the period 2012 - 2016 are summarized in Figure 7. Most accidents occurred among drivers with the 4 - 6 years practice duration at FRS CR. The number of accidents does not decrease significantly even after acquiring further experience in the range of 7 to 19 years. The reduction occurs after 20 years of driving practice.

**Figure 7: Number of Traffic Accidents (TA) in Relation to the Driver's Practice Achieved at FRS CR**



Source: own research based upon data from General Directorate of the FRS CR (2012-2016)

## 5. Conclusion

The paper focused on the analysis of road traffic accidents in the CR which is considerably higher than in some EU Member States (e.g. in the Slovak Republic) according to police statistics. In the framework of the overall road accident survey, we mainly focused on traffic accidents of firefighters during the rides for intervention at FRS CR. We also dealt with the causes of accidents and the relationship between the number of accidents and the age of drivers who caused a traffic accident.

In the beginning of the analysis, two elementary hypotheses were stated based on the Road Accident Report (Police Presidium of the Czech Republic, 2017). After evaluating results of the presented analysis we had to state that these hypotheses have not been verified. The characteristics of firefighting vehicles traffic accidents, specifically of water tenders accidents, were different from the overall police statistics.

The first hypothesis declared: Wrong way of driving is the most common cause of traffic accidents. This hypothesis has not been verified. It was found that in the case of water tenders the most common cause of accidents was wrong bypassing (31 %) followed by dangerous reversing and turning (27 %) and speeding (19 %).

The second hypothesis stated: Drivers under the age of 30 cause the majority of traffic accidents. The hypothesis was not proved likewise. We divided the drivers into 10-years age groups. Drivers of the age 30 - 39 caused the most traffic accidents, according to our findings, see Figure 5. The group of the age 40 - 49 was another risky one in terms of traffic accidents.

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## References

- [1] Čermeková, Š., Vlček, P., Wilczková, M. (2014). Road Safety and Increasing of Logistics Requirements: Case Study. In: *International Conference on European Integration 2014. Proceedings of the 2nd International Conference on European Integration 2014*. Ostrava: VŠB-TU Ostrava, pp. 70 – 78.
- [2] Dittmar, M.J. (2005). Technology roundup: Safety drives research projects. *Fire Engineering*, 158 (5), pp. 67-78.
- [3] European Union (2010). *Consolidated Versions of the Treaty on European Union and the Treaty on the Functioning of the European Union* [online]. [cit. 2018-02-14]. Available at: <https://publications.europa.eu/en/publication-detail/-/publication/3c32722f-0136-4d8f-a03e-bfaf70d16349/>.
- [4] Fire Rescue Service of the Czech Republic (2006). *Instruction of the Director General of the Fire Rescue Service of the Czech Republic and the Deputy Minister of the Interior dated 13 March 2006, which issued the Machinery Services Regulations of the Fire Rescue Service of the Czech Republic*. (in Czech). Praha: Collection of internal acts of the Director General of the Fire Rescue Service of the Czech Republic and the Deputy Minister of the Interior No. 9.
- [5] Mesjasz-Lech, A. (2016). Directions of Changes in the Sustainable Development of Transport in Poland in the Context of European Integration. In: *International*

- Conference on European Integration 2016. Proceedings of the 3rd International Conference on European Integration 2016.* Ostrava: VŠB-TU Ostrava, pp. 623 – 630.
- [6] Ministry of the Interior of the Czech Republic (2016). *Analysis of Traffic Accidents at Fire Rescue Service Units in 2015.* Praha: Ministry of the Interior - General Directorate of the Fire Rescue Service of the Czech Republic. No. MV- 47258-1/PO-IZS-2016.
- [7] Ministry of the Interior of the Slovak Republic (2017). *Porovnanie základných ukazovateľov o dopravných nehodách.* [online]. [cit. 2018-02-26]. Available at: <https://www.minv.sk/?statistika-1&rok=2016&mesiac=12>
- [8] Police Presidium of the Czech Republic (2017). *Road Accident Report of the Czech Republic in 2016.* Praha: Directorate of the Traffic Police Service of the Police Presidium of the Czech Republic.
- [9] Šnelly, L. (2011). *Analysis of Traffic Accidents at Fire Rescue Service Units in 2010.* Praha: Ministry of the Interior - General Directorate of the Fire Rescue Service of the Czech Republic. No. MV-62721-1/PO-IZS-2011.
- [10] USAR (2017). *Providing of Humanitarian Assistance Abroad* [online]. [cit. 2017-12-18]. Available at: <http://www.usar.cz/webmagazine/kategorie.asp?idk=289>

## The Role of European Funds in the Development of Organic Food Market in Poland

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### **Abstract**

*Organic farming and organic food are nowadays very important issues related to the health of modern society. The development of the organic food market in Poland is a problem that inspired the writing of this article. The aim of this article is to examine the role played by the subsidies granted by European funds for farmers in Poland and an attempt to assess the influence of these funds on the development of the organic food market. The article thus presents the topic of organic food in connection to European funding. The hypothesis advanced in the empirical part of the article has been confirmed by an appropriate analysis. The analysis of the Pearson correlation coefficient and linear regression coefficient was used in the work. Both indicators showed a relationship between the number of organic farms and the value of financial assistance provided by the European Union. The dynamics of the number of organic farms in Poland was also examined.*

**Keywords:** *European funds, European Union, organic agriculture, organic food, organic food market,*

**JEL Classification:** *Q11, Q13, H20*

### **1. Introduction**

The aim of this article is to examine the role played by the European funds in shaping the market of organic farming in Poland. At the onset of the 21st century a significant rise in consumers' interest in this market and this type of products was observed. Such a demand caused in turn an increase in the number of organic farms producing food according to the precepts of organic agriculture. With time, the production of organic food in Poland was given certificates and was standardized, so that consumers have now a ready access to such products in every supermarket.

Apart from a section devoted to theory containing a description of the organic food market, organic farming and the European funds supporting this area of agriculture, the article also includes an empirical section, which contains a statistical analysis of data pertaining to the amount of subsidies for agriculture and the number of organic food producers in Poland. The following hypothesis has been assumed: the overall value of the aid allotted by EU funds has an impact on the number of organic food producers in Poland. The article thus discusses existing literature on the subject as well as employs a statistical analysis.

### ***1.1 Organic Food***

Organic food is the product of organic agriculture which utilizes natural processes on the farm and links agricultural production with environmental protection. Therefore, the processes of plant and animal production excludes the use of synthetic substances such as synthetic fertilizers, chemical pesticides or growth hormones (Michalczyk, 2016). The production of such food should be done as close to nature as possible (Wojciechowska-Solis & Soroka, 2017).

The solutions introduced by the member states of the European Union exerted a significant influence on the shape of Polish law pertaining to the production of organic food. EU membership forced Poland to adjust Polish regulations to EU regulations. The first key EU document regulating the market for organic products was the Council of the European Communities regulation of 1991 on organic production of agricultural products and indications referring thereto on agricultural products and foodstuffs (Council Regulation (EEC) No 2092/91). Subsequent EU legislation brought the publication of further documents, of which the ones most important for the current discussion are: Council Regulation (EC) on organic production and labelling of organic products and repealing Regulation (EEC) of 1991 as well as two Commission Regulations (EC) of September and December 2008. They have established the rules for the implementation of the Council Regulation on organic production, labelling and inspection respectively, as well as rules for the import of organic products from non-member countries. Another regulation referring to more detailed aspects of the areas mentioned in the previous one, stipulates precisely the methods of production of agricultural products and foodstuffs which may be entitled to bear a logo of organic production. The right to labelling and advertising of foodstuffs as products made according to the standards of organic farming may be obtained if 95 % of the total components used in the production of such foodstuffs comes from agriculture using organic methods. The final step in obtaining the logo of EU organic product consists in undergoing assessment through the process of certification (Michalczyk, 2016).

### ***1.2 Organic Agriculture***

Unfortunately, intensive agricultural practices that yield a large number of produce exploit the soil excessively. This is the reason for the need to limit such soil exploitation and to resort to methods improving soil fertility. The use of pesticides and other substances harmful to the environment has led, among other reasons, to the rise of organic agriculture (Komorowska, 2014).

Improved animal welfare, environmental protection and potential beneficial effects on human health are some of the reasons for the increasing demand for organic products (Cubero-Leon, De Rudder, Maquet, 2018). The development of organic farming is the effect of changes in society, the environment, health care and economy, and, in particular, in the complex of agro-food production. Organic agriculture is a modern method of farming which ensures a continuous soil fertility, good health condition of animals, and a high biological quality of crops. Currently, it constitutes the fastest developing branch of agriculture in the world, which is especially evident in EU countries. Organic agriculture started rapidly developing in Western Europe in the 1980s, which was in part stimulated, among other factors, by the growing distrust towards foodstuffs produced with the use of intensive farming, by the fear of BSE and GMO, as well as by the EU funding. In Poland, a dynamic growth in the number of organic farms happened at the beginning of the 21<sup>st</sup> century. Undoubtedly, it was connected with the fact that Poland had joined the EU and the appearance of financial subsidies for the development of organic farms (Jeziarska-Thöle & Biczowski, 2017).



### **1.3 The Consumer in the Organic Food Market**

Similarly to other forms of activity, farming depends, to a great degree, on modern technology, which provides specific sources of information. In the case of organic agriculture these sources of information provide the profile of an organic foodstuffs consumer. The producer may also use the Internet for the purposes of organic product sale and distribution (Ciupiał Szelağ-Sikora Tabor, 2017).

The factor determining the further development of organic food market, especially on a local scale, is the positive attitude of buyers displaying an ethnocentric preference while shopping. Ethnocentrism means that the local product is preferred and the foreign product is rejected (Nestorowicz Rogala Jerzyk Pilarczyk, 2016). In the realities of highly developed food industry, customers are more and more aware of the dependence of good health on the quality of consumed foodstuffs, thus recognizing the importance of healthy products. Consumers expect the broadening of the range of organic food products (Grzybek Kawa, 2017). A higher level of education and a better economic situation in a substantial number of societies provided the impulse for a greater sense of responsibility for progressive degradation of the natural environment and for the disturbance of its balance (Michalczyk, 2016). Organic food consumers are characterised by a high level of wealth, the possession of an intermediate or a high level of education, and an increased awareness of the importance of healthy lifestyle as well as of the need for environmental protection for the sake of present and future generations. Therefore, the most common reason for purchasing organic foodstuffs is the care for one's and family members' well-being (Barłowska & Wolanciuk & Idec, 2017).

## **2. The Role of EU Funds in the Development of Organic Agriculture in Poland**

With the creation of a European space was needed to solve the differences between member countries. One of the objectives of the EU is its balanced development that is connected with a reduction of a structural differences between the regions known as cohesion (Kyjonkova, 2016). In the last decade, rural areas have substantially benefited from the opportunities of development given by foreign subsidies such as EU funding, at the same time building up their own endogenic potential. It is worth remembering that for whole decadesthe Polish countryside remained on the margins of the major developmental processes, which contributed to its general civilizational backwardness on many levels, such as the following elements: the underdeveloped social and technical infrastructure, the low level of education in rural population, the lack of investments in the visual outlook and structural character of the rural areas, the disorder in the distribution of public spaces and the dominance of small farms (Biczkowski, 2016).

Taking into consideration the fiscal effects of EU membership, the EU states may be divided into two groups: the net payers (countries which contribute more to EU budget than receive from it) and the nett receivers (countries which receive more funds from the budget than contribute to it). Since the first year of its EU membership, Poland has been a net receiver of the EU budget. What is more, currently Poland is the largest net receiver. The fiscal net effect of EU membership for Poland is the following (Pawlas, 2016):

1. In the years 2004-2006 Poland received 6.3 billion euros, that is about 2.1 billion euros a year.
2. In the years 2007-2013 Poland received 65 billion euros, that is about 9.2 billion euros a year.

3. In the years 2014-2020 Poland is due to receive 75.9 billion euros that is 10.83 billion euros a year.

Local governments constitute a very important group of beneficiaries of EU funding which in the years 2007-2013 received about 25% of total subsidies Poland received, and in the years 2014-2020 this sum will be increased to 40% of total subsidies (Czudec, 2017). It is possible to say that the EU funds have been successfully used, which seems to be confirmed by the following numbers: there were 301.7 thousand applications for the total funds awarded of 613.3 billion PLN. The effect of the use of the EU funds are noticeable in Poland, which is confirmed by the advertisement slogan: "Used by all – seen by few" (Sorychta-Wojczyk & Musioł-Urbańczyk, 2016).

With high expectations the European Union Member States were watching the development of ongoing discussions, intensive negotiations and subsequent final shape of so called the new Common Agricultural Policy of the European Union, which lasted almost three years (Harakal'ová, 2016). Recently, there have been more and more discussions taking place in the professional and lay public concerning the problems associated with utilising funds from EU structural funds (Beck, 2012). One of the most important economic issues are still the problems resulting from the division of resources and the lack of an answer to the question why different economies develop at different paces. This issue has been raised more and more often in the light of a growing critique of the European integrity politics, one of the basic tools of which are EU funds received from the common EU budget. The assumed realignment of the social and economic conditions of EU regions falls further and further short from the empirical experience of the state of affairs. The major problem consists in the fact that the regions labelled as least developed far too often resign from the use of the available aid or they do not take appropriate measures to secure contracts, specifically those intended for the development of infrastructure and innovation. They are however leaders in projects aimed at the human resources programmes (Jęgorow, Regional..., 2017).

Cohesion policy formed the foundations for the designing of the EU funds for the years 2014-2020 with the assumption that the major part of activities it consists of will be financed by EU funds available in the current fiscal perspective (Pondel, 2017). The EU cohesion policy has become a fixed element in the functioning of numerous sectors of Polish economy. As much as entrepreneurs with a realistic approach to business have not been affected by the unique phenomenon of EU funds, the contribution of EU subsidies in the public sphere has become almost a given in the current activities of a huge number of entities supported by public funding, including local government units (Jęgorow, Jednostki..., 2017). The system of funding local governments seems to be inadequate as far as their tasks are concerned, which forces them to pursue external sources of funding, and in particular, investments. Because of the non-repayable character, local governments focus their efforts on the available financial means from EU budget. The level of active effort in applying for these funds depends on institutional and programmatic preparation as well as on the condition of their budgets which guarantee the availability of their own necessary contribution (Wojarska, 2017).

### **3. The Analysis of the Rates of EU-Funded Aid for Polish Agriculture**

This article opened with a discussion of numerical data concerning the size of the organic food market in Europe and in the European Union. Table 1 presents this data in detail. The final verse of the Table shows the indicator of the growth dynamic of the organic food market in EU in comparison to previous years. From the presented numbers it unequivocally follows that the organic food market has been growing consistently.

**Table 1: Development of Organic Food Market in Europe in 2004-2012**

	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Europe</b>	10.8	12.1	13.5	15.2	17.1	18.2	19.7	21.5	22.8
<b>European Union</b>	10.0	11.2	12.6	14.3	15.9	17.0	18.2	19.7	20.9
<b>The EU dynamics indicator</b>	-	112	112.5	113	111	107	107	108	106

Source: Komorowska, 2017

This section of the article in major part focuses on the question of organic market development in Poland in correlation with the size of aid allocated from European funds.

**Table 2: The Number of Organic Producers in Poland and the Yearly Aid from the European Agricultural Fund for Rural Development (EAFRD)**

Years	The number of organic producers in Poland	The dynamics of the number of producers in Poland	EAFRD aid in a given year in Euro
<b>2007</b>	12121	-	1989717841
<b>2008</b>	15206	125	1932933351
<b>2009</b>	17423	114	1971439817
<b>2010</b>	20956	120	1935872838
<b>2011</b>	23847	114	1860573543
<b>2012</b>	26376	111	1857244519
<b>2013</b>	27093	103	1851146247
<b>2014</b>	24829	92	1569517638
<b>2015</b>	22991	93	1175590560

Source: EPROW 2007-2013, EPROW 2014-2020 [www.minrol.gov.pl], Raport o stanie rolnictwa ekologicznego w latach 2013-2014 [www.ijhar-s.gov.pl], Rocznik statystyczny rolnictwa, 2016

Table 2 shows the number of organic producers in Poland and the yearly contributions of EAFRD in the period of 2007-2015. The data from this period have been selected because during those years one of the largest aid programmes for Polish enterprises was implemented. For the data in Table 2, Pearson's correlation coefficient (R) has been calculated and its value was -0,381679144. The approximate value of the correlation coefficient was -0,40. It means that the number of organic producers in Poland and the yearly rate of EU aid for all farmers are on average negatively correlated. The linear regression coefficient for the given data is 0,11450442. This means that if the value of one variable increases, the value of the second variable also increases. Additionally, the analysis of the dynamics of the number of organic producers in Poland has been prepared, and its indicator has been calculated in comparison to the preceding years. As it follows from Table 2, a definitive rise in the number of organic producers from 2004 to 2013 may be observed. The years of 2014 and 2015 show a minimal collapse of the trend and a slight drop in this number. Table 3, in turn, shows allotted aid by EU funds and Poland's own contribution in the respective programmes.

**Table 3: The Comparison of Poland's Fiscal Contribution and EU Aid in Rural Development Programmes (RDP)**

Programmes	EAFRD aid	Poland's contribution	Total	EAFRD aid in %
<b>RDP 2004-2006</b>		72600000	3592400000	79,8%
<b>RDP 2007-2013</b>	13398928156	4013750110	17412678266	76,9%
<b>RDP 2014-2020</b>	8697556814	4914654614	13612211428	63,9%

Source: <http://www.minrol.gov.pl/Wsparcie-rolnictwa/Program-Rozwoju-Obszarow-Wiejskich-2007-2013>

As it follows from Table 3, the value of aid allotted by EU funds is multiple times greater than Poland's own contribution to both of the programmes mentioned earlier in the theoretical section of this article. The first programme active short after Poland's EU access was short, but the value of the EU aid allotted was 79.8% of the total value of the programme. In the period of 2007-2013, the value of EU contribution to the total value of aid given to Polish farmers was 76.9%. Yet, in the years 2014-2020 this contribution has dropped to the level of 63.9%, but the total value of aid given has also decreased. It very well may be that the drop in the number of organic producers in Poland is connected to the decrease in the aid allotted in the year 2014. In order to prepare a thorough analysis it would be necessary to calculate the percentage of aid allotted only to organic agriculture and to compare it with the number of organic farms. Nevertheless, given the limited scope of this article, its analysis will not proceed further.

**Table 4: The Aid Allotted to Polish Organic Farmers in Rural Development Programme in 2014-2020**

Aid	In the period of conversion	After the period of conversion
<b>Plant cultivation</b>	966 PLN/ha	792 PLN/ha
<b>Vegetable cultivation</b>	1557 PLN/ha	1310 PLN/ha
<b>Basic orchard cultivation</b>	1882 PLN/ha	1501 PLN/ha
<b>Forage cultivation</b>	787 PLN/ha	559 PLN/ha

Source: <http://www.farmer.pl/finanse/dotacje-i-doplaty/rolnictwo-ekologiczne-w-prow-2014-2020,54837.html>

Table 4 only signals the real value of the aid for Polish organic farmers according to the RDP for the years 2014-2020. As it is visible above, the European organic farmers are not left without support in their enterprises due to the aid from the EU.

#### 4. Conclusion

The hypothesis ventured in this article has been demonstrated as correct, because the correlation between the value of the allotted aid from EU funds and the number of organic farmers in Poland has been revealed. Since the beginning of the functioning of the EU aid programme, the number of the organic farmers has been growing. It is interesting to notice

that since the introduction of the new programme in 2014, a slight drop in the number of organic farms has been observed. The average correlation between these data seems to be suggesting such a dependence. A special attention needs to be paid to the issue of the stable, regular increase in the number of organic producers since Poland's access to the European Union. The data from the years 2004-2006 have been omitted in the analysis due to their impossibility of reference to the data from the particular years of the programmes discussed. According to the data of the Agricultural and Food Quality Inspection, in 2004 there were only 3760 organic producers, in 2005 –7182, and in 2006 as many as 9194 (Raport o stanie rolnictwa ekologicznego w latach 2013-2014 [www.ijhar-s.gov.pl] [A Report on the State of Organic Farming in the Years 2013-2014]). Having now a broad outlook on the issue, it is possible to state unequivocally that the EU fiscal aid has substantially supported the development of organic food market in Poland, and it is so not only because of the rise in the number of organic producers, but also because of the process of certification and labelling. The introduction of one common logo in the whole of European Union has certainly built up trust of Polish consumers in this type of foodstuffs. It is possible to say with a degree of certainty that the organic food market in Poland is not as developed as the one in Germany or in other leading countries, but due to further EU subsidies this state of affairs has been constantly improving.

## References

- [1] Barłowska, J., Wolanciuk, A. and Idec J. (2017) Rolnictwo ekologiczne w Polsce na tle Unii Europejskiej i świata. *Przegląd hodowlany*. vol. 2, pp 1-4, <http://ph.ptz.icm.edu.pl/wp-content/uploads/2017/03/1-Barłowska-.pdf>.
- [2] Beck, V. (2012). Financial Support versus Economic Development of Selected Regions in the EU. In Honová, I., L. Melecký and M. Staničková (red.). *Proceedings of the 1st International Conference on European Integration 2012*, Ostrava: VŠB – Technical University of Ostrava, pp. 8-18.
- [3] Biczkowski, M. (2016). EU funds implemented by the regional operational programmes as neo-endogenous development factor for rural areas. *Studia obszarów wiejskich*, vol. 41, pp. 63-81.
- [4] Ciupiał, M., Szelaż-Sikora, A. and Tabor S. (2017). Mechanisms of supporting information management in agriculture. *Acta Scientiarum Polonorum Oeconomia*, vol 16, issue 2, pp. 23-32.
- [5] Cubero-Leon, E., De Rudder, O., Maquet, A. (2018) Metabolomics for organic food authentication: Result from a long-term field study in carrots. *Food Chemistry* 239, <https://www.sciencedirect.com/science/article/pii/S0308814617311433>, pp. 760-770.
- [6] Czudec, A. (2017) Fundusze europejskie a rozwój gospodarczy w skali lokalnej. *Nierówności Społeczne a Wzrost Gospodarczy*, vol. 49, pp. 35-47.
- [7] Grzybek, M., Kawa, M. (2017). Expectations of Podkarpacie residents with regard to offers of organic food products of regional origin. *Journal of Agribusiness and Rural Development*, vol. 43, pp. 79-85.
- [8] Harakal'ová, L'. (2014). New Form of the Common Agricultural Policy of the European Union After 2014. In Honová, I. et al. (ed.). *Proceedings of the 2nd International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, pp. 211-218.

- [9] Jegorow, D. (2017) Jednostki samorządu terytorialnego jako beneficjent polityki spójności w latach 2007-2013. *Nierówności Społeczne a Wzrost Gospodarczy*, vol. 49, issue 1, pp. 168-181.
- [10] Jegorow, D. (2017) Regional variation of allocation of European funds in Poland in cohesion policy in 2007-2013. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu. Research Papers of Wrocław University of Economics*, vol. 466, pp. 119-127.
- [11] Jezierska-Thöle, A., Biczkowski, M. (2017). Financial funds from European Union as a chance for the development of the sector of organic farms in Poland. *Roczniki Naukowe Stowarzyszenia Ekonomistów Rolnictwa i Agrobiznesu*, vol. XIX, issue 2, pp. 95-101.
- [12] Komorowska, D. (2014). Development of organic production and organic food market in Europe. *Acta Scientiarum Polonorum Oeconomia*, vol. 13, issue 4, pp. 91-101.
- [13] Kyjonková, L. (2014). In Honová, I. et al. (ed.). *Proceedings of the 2nd International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, pp. 417-423.
- [14] Michalczyk, J. (2016). Rynek żywności ekologicznej w warunkach członkostwa Polski w Unii Europejskiej. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu. Research papers of Wrocław University of Economics*, vol. 448, pp. 178–191.
- [15] Nestorowicz, R., Rogala, A., Jerzyk, E. and Pilarczyk B. (2016) Etnocentryzm w ujęciu lokalnym jako czynnik rozwoju rynku żywności ekologicznej w Polsce. *Stowarzyszenie Ekonomistów Rolnictwa i Agrobiznesu. Roczniki Naukowe*, vol. VIII, issue 6, pp. 144-151.
- [16] Pawlas, I. (2016) Bilans członkostwa Polski w Unii Europejskiej po dziesięciu latach – wybrane zagadnienia. *Studia ekonomiczne. Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach*, vol. 272, pp. 109-119.
- [17] Pondel, H. (2017) Fundusze Unii Europejskiej jako czynnik wspierający zrównoważony rozwój obszarów wiejskich. *Studia Oeconomica Posnaniensia*, vol. 5, issue 5, pp. 88-102.
- [18] Rocznik statystyczny rolnictwa. Roczniki branżowe (2016). Warszawa.
- [19] Sorychta-Wojczyk, B., Urbańczyk, A. (2016) Analiza wykorzystania funduszy europejskich w Polsce – nowa perspektywa, nowe wyzwania dla rozwoju województw. *Organizacja i zarządzanie. Kwartalnik Naukowy*. vol. 1, issue 33, pp.145-162.
- [20] Wojarska, M. (2017) Typology of municipalities from the viewpoint of European Union funds. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu. Research papers of Wrocław University of Economics*. vol. 466, pp. 244-254.
- [21] Wojciechowska-Solis, J., Soroka, A. (2017) The attitude of Polish consumers to organic food. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu. Research papers of Wrocław University of Economics*, vol. 475, pp. 380-389.

- [22] Program Rozwoju Obszarów Wiejskich na lata 2014-2020. [online].[cit.2018-02-20]. Available at: <http://www.minrol.gov.pl/Wsparcie-rolnictwa/Program-Rozwoju-Obszarow-Wiejskich-2014-2020>.
- [23] Program Rozwoju Obszarów Wiejskich na lata 2007-2013. [online].[cit.2018-02-20]. Available at: <http://www.minrol.gov.pl/Wsparcie-rolnictwa/Program-Rozwoju-Obszarow-Wiejskich-2007-2013>.
- [24] Raport o stanie rolnictwa ekologicznego w Polsce w latach 2013-2014. Condition of organic farming in Poland. The report 2013-2014. IJHARS [online].[cit.2018-02-20]. Available at: <http://www.ijhar-s.gov.pl/pliki/A-pliki-z-glownego-katalogu/ethernet/2015/wrzesien/Raport%20o%20stanie%20rolnictwa%20ekologicznego%20w%20Polsce%20w%20latach%202013-2014.pdf>
- [25] Rolnictwo ekologiczne w PROW 2014-2020 [online].[cit.2018-02-20]. Available at: <http://www.farmer.pl/finanse/dotacje-i-doplaty/rolnictwo-ekologiczne-w-prow-2014-2020,54837.html>.

## Characteristics of Selected European Associations Promoting Organic Farming Practices and Development in this Field

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### **Abstract**

*Organic production is an overall system of farm management, food production and its impact on the environment. The challenge for the organic sector is to ensure a steady increase in supply and demand for organic foods and consumer confidence in these products. In recent years, organic foods have been highly preferred by European consumers, who no longer buy processed food products produced by large multinational enterprises that contain large amounts of additives. The aim of the article is to characterize selected European associations promoting organic farming practices, organic food production, organizing: control bodies, authorities, small, medium-sized and large-scale enterprises, research units and consumers in order to identify the research needs of the organic farming sector and provide them with European legislation.*

**Keywords:** EU legislation, EU units promoting and supporting organic farming, organic food control in EU

**JEL Classification:** Q13, Q18, M30

### **1. Introduction**

Organic production is a complex system of management of agricultural farms and food production, which is a combination of best environmental practices, a high level of biodiversity, the protection of natural resources, the application of stringent animal welfare and production standards, in accordance with the preference of consumers for organic food products produced using natural substances and processes (Council Regulation (EC) (No 834, 2007). The Regulation (EC) No 834 contains the basic principles of organic farming and labelling of organic products in line with the 2004 European Action Plan on Organic Food and Agriculture. This regulation applies as of 1 January 2009 in the same way in all EU Member States (Schlosserová, 2012).

The production system of organic farming is based on the preference of quality over quantity, which distinguishes it from conventional farming. Organic farming combines traditional practices and modern scientific and technical knowledge in an integrated, primarily extensive



system that, by its very nature, differs from intensive conventional farming (Kozáková et al., 2015).

To achieve the positive effects of organic farming and organic production with minimal impact on the environment, The EU has introduced several binding regulations directly applicable in all EU Member States on the protection of natural resources, the use of chemicals (pesticides, industrial fertilizers, etc.) and genetically modified organisms (GMOs) in agriculture (EU Agricultural Markets Briefs, 2014).

The European Commission adopted the first European Action Plan on Organic Food and Agriculture in 2004 to support and strengthen this sector. Most of the 21 measures from the first plan were achieved, in particular the creation of a new logo of the European Union's organic production. Since then, the European Council has been examining legislation on organic farming in 2007 and the European Commission has adopted a proposal for a new regulation of the European Parliament and of the Council on organic production and labelling of organic products and repealing Council Regulation (EC) 834/2007.

In March 2014, the European Commission presented a Second Action Plan For The Future of Organic Farming in the European Union, targeting three priorities by 2020 (European Commission, 2014):

1. Enhancing the competitiveness of organic producers from EU member states:
  - raising awareness of EU instruments for organic production and their synergies,
  - addressing technical deficiencies in organic production through research, innovation and dissemination of knowledge,
  - raising awareness of the organic production sector as well as of the market and trade,
2. Strengthening consumer confidence in the European system for organic food and agriculture.
3. Strengthening the external dimension of the EU's organic production system.

The action plan is aimed at legislative changes resulting in the growth of organic production, especially in the area of supply and demand. This action plan also offers a contribution to the objectives set out in the Europe 2020 strategy (European Commission, 2014).

Food quality and food safety are strongly discussed topics in the last years. Consumers have become more critical in their food choice, they are getting interested in origin, composition, methods of production, and other quality attributes of food products. The effort to provide consumers a higher food quality and guarantees that product quality stands up to given standards has led to a number of quality assurance schemes in an international, European Union (EU) and national levels (Velčovská, Sadílek, 2015; Velčovská, 2016). A lot of factors are influencing consumer's purchasing decision related to food products. These factors are e.g. quality, cost, lifestyle, motivation to support local producers, local economic growth, labelling (e.g. organic food, PDO, PGI, TSG) (Arsil et al., 2011).

In the case of organic food, the most important factor which influences consumer's shopping behaviour is health benefits, but the main barrier is high price, the same as in case of sustainable products (Rööös, Tjärnemo, 2011; Grunert, 2011). As have shown results of other research (Jarossová, Pazúriková, 2014; Velčovská, Sadílek, 2014; Jarossová, 2016), the main barrier in purchasing this kind of certified food is a low familiarity with these quality labels. This situation is caused by shortage of information or inadequate presentation of that information on these labels. They should be supported and their promotion should be

implemented into producers' marketing strategy in order to increase the consumers' awareness and perceived credibility of quality labels (Velčovská, Sadílek, 2014).

People realize more and more the importance of ecological agriculture and many different organizations and institutions focuses on supporting them (Lacková, Karkáliková, 2014).

### ***1.1 Control Bodies and Control Authorities in the Organic Sector in the EU***

In recent years, many of private and state quality schemes for food products had been created. These systems are a guarantee to consumers that what is stated on the product label is consistent with a particular food production system. On the other hand, they are a guarantee of effective consumer information and require certain certification costs. The European dimension of certification systems begins with compliance with mandatory production standards and ends with additional requirements relating to environmental protection, animal life, business ethics, justice, and so on. To enable farmers, processors and traders to use the EU organic logo (Fig. 1) and labelling it on products, they must meet EU requirements in this area.

**Figure 1: EU Organic Logo**



Source: EU Commission [online], 2010

EU Member States, when setting up an organic farming control system, can choose between a public, private and mixed system, designate one or more competent authorities responsible for the control of these entities. The competent control authorities are obliged to organize audits or inspections of control bodies and, in case of non-compliance, withdraw their accreditation. Controls are carried out at each stage of the “ecological chain”. Every operator - farmer, processor, trader, importer or exporter, excluding wholesalers who handle packaged organic food - is checked at least once a year or more frequently, based on risk assessments. Each certified organic farmer in EU countries is regularly inspected for compliance with the rules of the production system. Inspections are carried out by designated inspection organizations, which we divide into three groups (Schlosserová, 2012):

- **Private inspection organizations (type A)** - the State shall designate an official control body, which delegates the execution of official controls in the system of organic farming to private inspection organizations. These organisations have the appropriate accreditation for conducting inspections and meet certain criteria defined by governmental authorities. This type of control is applied in most EU countries, including Slovakia, the Czech Republic and Austria.
- **State inspection organizations (type B)** - official control of organic farming operators is carried out only by the state (e.g. Denmark, Estonia, Finland, Lithuania, Malta).
- **System of mixing private and state inspection organizations (type C)**, which is successfully operating for example in Spain, Luxemburg, Poland.

Inspectors are required to oversee compliance with all statutory rules for production, processing, packaging, storage, labelling and the sale of bio production, including conducting accurate documentation of all operations carried out.

## 2. Problem Formulation and Methodology

Continuous pollution of the environment, biodiversity loss, increase in allergic and oncological diseases lead to that people are becoming more and more aware of the importance of organic farming, which is exploiting resources and landscapes in a sustainable manner. This is a prospective way of managing, which is being developed in all EU countries. The share of agricultural land managed environmentally is steadily growing. This is evidenced by the fact, that to promote and support organic farming, different associations and institutions are being created within the EU, an overview of which is addressed in the article.

The methods of analysis and synthesis were applied to obtain theoretical backgrounds on this issue. The analysis method is the process of breaking a concept down into more simple parts, so that its logical structure is displayed (Blackburn, 2008). The research synthesis is defined as the conjunction of a particular set of literature review characteristics. Research syntheses attempts to integrate empirical research for the purpose of creating generalizations (Cooper, Hedges, 1994). Using these methods, we analysed information gained from domestic and foreign scientific and specific sources, e.g. the information provided on the websites of the European Commission. Research was conducted from February 12<sup>th</sup> to February 28<sup>th</sup> 2018.

## 3. Problem Solution

There are many organizations in Europe and around the world promoting the principles of organic farming and its positive impact on the environment. The first one is the IFOAM EU Group (Fig. 2) - an independent regional group that belongs to The International Federation of Organic Agriculture Movements – IFOAM) which was established in 1972. The IFOAM EU Group was established as a regional group within the IFOAM in 2000 and in presently representing more than 300 IFOAM member organizations operating in 27 EU countries, candidate countries and Member States within EFTA. Member organisations represent many professionals from different areas, e.g. consumers, farmers and processors, researchers, education and advisory organisations, certification bodies and commercial organic companies (IFOAM Organics International [online], 2018a).

**Figure 2: Logo of the Regional European Group Belonging to the IFOAM**



Source: IFOAM EU GROUP [online], 2018

The **IFOAM EU Group** promotes the development and integrity of organic food and organic farming in Europe. It is a forum for negotiating common interests, important for the exchange of information and work on the preparation of EU policies. According to the Statute, it is possible to summarize the main objectives of this organization:

- promoting the principles and practices of organic farming and food production in the EU, as defined by IFOAM standards,

- coordination of activities and representation of IFOAM EU countries in EU and outside of Europe,
- exchange of information between IFOAM members in EU countries and other entities around the world,
- assistance in coordinating research on organic food production throughout the European Union and disseminating its results,
- execute measures to establish a common policy of the Group in relation to the objectives pursued.

Representatives of the IFOAM EU Group take part in many of the European Commission's committees, including advisory groups: quality of organic farming and health, rural development and others. The Group has observer status in the Agriculture and Environment Advisory Group. It is also represented in the DG Sante Advisory Group on the Food Chain and Animal and Plant Health.

IFOAM currently has over 800 branches in more than 100 countries worldwide (IFOAM EU [online], 2016b). It is the largest international organization in the world in the field of organic farming. IFOAM has developed the principles and guidelines that have been considered as the basis for organic farming. They have become the basis for the first international regulation on organic farming and the labelling of its products.

It is well known that the basic objectives of organic farming are of a complex nature and concern, among other things, the production of high-quality food, activities supporting and preserving the biological effectiveness of the soil, maintaining the genetic diversity of ecosystems, the use of renewable raw materials and promoting local and regional production and distribution (Kreisberg, 2006). The IFOAM vision is the worldwide adoption of ecological, social and economic systems that are based on the principles of organic farming (Fig. 3). The IFOAM organic farming principles are: health, ecology, fairness (decency, fairness and care).

**Figure 3: Principles of Organic Agriculture Farming According to IFOAM**



Source: IFOAM Organics International [online], 2018

**The European Organic Certifiers Council – EOCC** is an international non-profit organization connecting the inspection bodies and authorities operating in the field of certification of organic farming. The organization was founded in 2010 and currently has 51 members from around the world. The organization aims to increase the reliability of control and certification activities and decisions by the authorities in relation to European organic farming, exchange important information for control bodies, such as fraud cases, harmonising of interpretations of the European organic legislation by its members especially on inspecting ability of organic agriculture, processing and trade, sharing services and developing common methodologies and tools. The EOCC is considered to be a valuable EU partner, contributing expertise to improving the EU organic farming legislation (EOCC [online], 2018a). Logo of the organization is shown in Fig. 4.

**Figure 4: Logo of the European Organic Certifiers Council: EOCC**

Source: The European Organic Certifiers Council, [online], 2018b

Another important subject is the TP organics, European Technology Platform for Organic Food and Organic Farming. The Platform is one of the 40 European Technology Platforms officially recognized by the European Commission (Fig. 5). Its aim is to strengthen research and innovation for organic farming and other agroecological approaches that contribute to sustainable food and farming systems. The platform identifies the research needs of the organic sector and then relays research priorities to the policy-makers in Europe and beyond.

**Figure 5: Logo of the TP Organics European Technology Platform**

Source: TP Organics European Technology Platform [online], 2018b

TP Organics also informs its members about funding opportunities for research & innovation and promotes knowledge exchange between farmers, companies, and researchers. The Platform has 87 members and seven national platforms reaching 5.8 million farmers; 5,000 companies, 2,500 researchers and farm advisers and 20 million citizens (TP Organics [online], 2018a). TP Organics brings together small, medium and large businesses, researchers, farmers, consumers and civic associations operating in the eco-chain from production, supply, processing, marketing to consumption. The platform identifies the research needs of the organic farming industry, and then provides these findings to creators of European legislation. TP Organics also informs its members about the possibilities of funding research and innovation and supports the exchange of knowledge between farmers, society and researchers.

The last of the described organizations, **The European Consortium for Organic plant breeding – ECO-PB** deals with organic plant growing (Fig. 6). Consortium was established in 2001 to promote organic plant growing and build independent centres of expertise. The association is based in Freiburg, Germany.

**Figure 6: Logo of the European Consortium for Organic Plant Breeding (ECO-PB)**

Source: European Consortium for Organic plant breeding, [online], 2018

The main objective of the consortium is to promote organic farming, protect the environment and save agrobiodiversity through plant breeding programs intended specifically for the needs of organic farming. Therefore, the main activities of the consortium concern (ECO-PB [online], 2016) are:

- initiating, supporting and maintaining programs for environmental breeding of plants,
- the development of scientific concepts relating to organic plant breeding,
- the development and promotion of appropriate standards, procedures and legal frameworks for organic plant production,
- discussions and exchanges of knowledge and experience,
- providing independent, competent expertise to develop standards regarding organic plant growing,
- organizing meetings and seminars on organic seeds and environmental issues.
- set up organic variety trials on cereal and vegetable crops in different countries in Europe to study how they perform under different conditions.

#### 4. Conclusion

The aim of the article was to characterize selected European associations promoting organic farming practices, organic food production, organizing control bodies, authorities, small, medium-sized and large-scale enterprises, research units and consumers in order to identify the research needs of the organic farming sector and provide them with the creation of European legislation. There are many European associations, organizations promoting the principles of organic farming and its positive impact on the environment. They conduct a lot of activities concerning the promotion of organic farming, organic food, and organic plant breeding. They gather opinions and promote exchange of information between producers, farmers, consumers and other entities in order to improve regulations in this field in Europe. Some organizations also mediate in business contacts between various entities enabling them to obtain the necessary information and establish business cooperation.

The limitations of the research were related to the selection of described associations. The most-known organizations in the opinion of the authors of this article were selected for the analysis (IFOAM EU Group, the European Organic Certifiers Council, The European Consortium for Organic plant breeding) and TP Organics European Technology Platform.

At present, organic farming is on a global scale a continuously growing and evolving industry, which helps to protect biodiversity and preserve the principles of sustainable development. The rural development, resulting in increasing job opportunities, can be observed from the economic point of view. Organic farming contributes not only to job creation, but also to GDP growth. It is also involved in improving the country's trade balance. Organic farming is an area that the European Union supports and its aim is to continue this support. Most countries have organic farming systems including 5-12% of agricultural land and the number of subjects and farms are counted from hundreds to thousands. Organic farming is currently being practiced in more than 120 countries around the world and the total area of ecologically managed land is 22 million ha. From this point of view, close cooperation between institutions in the organic farming sector, producers and the exchange of information on organic food between the Member States and the European Commission is of great importance as well as the provision of up-to-date information through various organizations and associations focusing on organic food for the general public.

#### References

- [1] Arsil, P., Li, E., Bruwer, J. and Lyons, G. (2014). Exploring consumer motivations towards buying local fresh food products: a means-end chain approach. *British Food Journal*, vol. 116, iss. 10, pp. 1533-1549.

- [2] Blackburn S. (2008). *The Oxford Dictionary of Philosophy* (2 rev. ed.). Oxford: Oxford University Press.
- [3] Cooper, H., Hedges, L. (1994). Research synthesis as a scientific enterprise. In H. Cooper & L. V. Hedges (Eds.), *The handbook of research synthesis*. New York: Russell Sage Foundation.
- [4] Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products, repealing Regulation (EEC) 2092/91.
- [5] European Commission (2010). *EU organic logo* [online]. [cit.2018-03-08]. Available at: [http://europa.eu/rapid/press-release\\_IP-10-861\\_en.htm](http://europa.eu/rapid/press-release_IP-10-861_en.htm).
- [6] European Consortium for Organic plant breeding (2018a). *About ECO-PB* [online]. [cit.2018-03-08]. Available at: <http://www.eco-pb.org>.
- [7] European Commission. (2014). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Regions. An action plan for the future of organic production in the European Union [online]. [cit.2016-08-16] Available at: <http://eur-lex.europa.eu/legal-content/SK/TXT/PDF/?uri=CELEX:52014DC0179&from=en>.
- [8] European Consortium for Organic plant breeding (2018b). *Logo of the ECO-PB* [online]. [cit.2018-03-08]. Available at: <http://www.eco-pb.org>.
- [9] European Union Agricultural Markets Briefs. (2014). *The rapid growth of EU organic farming. Key facts and figures*. [online]. [cit.2016-08-16] Available at: [http://ec.europa.eu/agriculture/markets-and-prices/market-briefs/pdf/03\\_en.pdf](http://ec.europa.eu/agriculture/markets-and-prices/market-briefs/pdf/03_en.pdf).
- [10] Grunert, K.G. (2011). Sustainability in the food sector: a consumer behaviour perspective. *Int. J. Food Sys. Dyn.* vol. 2, iss.3, pp. 207–218.
- [11] IFOAM Organics International (2018a). *IFOAM EU GROUP* [online]. [cit.2018-03-08]. Available at: <https://www.ifoam.bio/en/regional-bodies/ifoam-eu-group>
- [12] IFOAM. Organics International (2018b). *About Us*. [online]. [cit.2016-10-25]. Available at: <http://www.ifoam.bio/en/about-us>.
- [13] IFOAM Organics International (2018). *Principles of organic agriculture* [online]. [cit.2018-03-08]. Available at: <https://www.ifoam.bio/en/organic-landmarks/principles-organic-agriculture>.
- [14] Jarossová, M.A. (2016). *Status and perspectives of market development of organic food, traditional and regional foods in the European Union and Slovakia*. Bratislava: EKONÓM.
- [15] Jarossová, M.A., Pazúriková, V. (2014). Traditional and regional foods: knowledge of their labelling by consumers. *Studia commercialia Bratislavensia: scientific journal of Faculty of Commerce*, University of Economics in Bratislava, vol. 7, iss. 28, pp.520-536.
- [16] Kozáková, J. et al. (2015). Economic evaluation of selected differences of ecological and conventional management in Slovakia. [online]. [cit.2016-11-05]. Available at: <http://www.vuepp.sk/EP2015/1/5Ko1.pdf>
- [17] Kreisberg J. (2006). Learning from organic agriculture. *Health and the Environ*,5, vol. 2, iss. 5, 450-452.

- [18] Krnáčová, P. (2016). Consumer Awareness of Food Labelling. In *Proceedings of 16<sup>th</sup> International Joint Conferences: Central and Eastern Europe in the changing business environment.*, Prague, Czech Republic: Oeconomica Publishing House, University of Economics, pp. 258-269.
- [19] Lacková, A., Karkalíková, Marta. (2014). Comparison of consumer shopping behaviour of organic food in Slovakia and abroad. In Chochól, A. (eds.). *Commodity science in research and practice: consumer protection and satisfaction: satisfaction protect.*, Cracow: Polish Society of Commodity Science, pp. 79-89.
- [20] Rööös, E., Tjærnemo, H. (2011). Challenges of carbon labelling of food products: a consumer research perspective. *Brit. Food J.* vol.113, iss. 8, pp. 982–996.
- [21] Schlosserová, J. (2012). *Hospodárenie v ekologickej poľnohospodárskej výrobe*. 1. vyd. Nitra: Agroinštitút Nitra.
- [22] The European Organic Certifiers Council (2018). *Logo of the EOCC* [online]. [cit.2018-03-08]. Available at: <http://eocc.nu>.
- [23] The European Organic Certifiers Council (2016). *Who we are* [online]. [cit.2016-08-26]. Available at: <http://eocc.nu/about/>.
- [24] TP Organics European Technology Platform (2018a). *About us* [online]. [cit.2018-03-08]. Available at: <http://tporganics.eu/about-us/>.
- [25] TP Organics European Technology Platform (2018b). *Logo of the TP Organics European Technology Platform* [online]. [cit.2018-03-08]. Available at: <http://tporganics.eu/>.
- [26] Velčovská, Š. Sadílek, T. (2015). Certification of cheeses and cheese products origin by EU countries, *Brit. Food J.*, vol. 117, iss.7, pp.1843-1858.
- [27] Velčovská, Š. Sadílek, T. (2014). Analysis of Quality Labels Included in the European Union Quality Schemes, *Czech J. Food Sci.*, vol. 32, iss. 2, pp.194–203.
- [28] Velčovská, Š. and Klapilová Krbová, P. (2016). Consumer Attitudes Towards Food Quality Labels in Selected European Union Countries, In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 1068-1077.



## **Labour Productivity and Competitive Position in International Trade of the Euro Area Countries – Comparative Analysis**

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### **Abstract**

*Competitiveness is the ability of market participants to present potential buyers with such an enticing offer, that will boost their sales and increase market share. Considering this issue, the immediate result of gaining competitive advantage is the growing exports, improvement of the current account balance. After joining the euro area member countries have lost the opportunity of improving their competitive position by using exchange rate and they have to compete with unit labor cost and labor productivity. The main aim of the paper is to analyze and evaluate, how the position in current account balance of the euro area and individual member states after joining the EMU has changed and what were the factors determining this position, with special attention to interpreting the changes in labor productivity. The results of the analysis show that there is some correlation between changes in labor productivity and current account balance.*

**Keywords:** *Current Account Balance, Economic and Monetary Union (EMU), International Competitiveness*

**JEL Classification:** *F10, F14*

### **1. Introduction**

In the context of the previous achievements in the field of the theory of foreign trade, competition at the international level consists primarily of the effective use of natural comparative advantages in particular countries and of the appropriate shaping of the related competitive advantages by implementing a suitable economic policy at the national and international level. Competitiveness is a multidimensional notion; a distinction should be drawn between international competitiveness, often referred to as competitive advantage, international competitive capability and competitive position. As stated by Bossak (1984) international competitive capability can be defined as an ability to struggle and compete and the benefits associated with a country's share in the international division of labour. From the point of view of developing international competitive capability, the crucial factors are the ability and inclination towards saving money, the tendency to take initiative and innovate, and self-organisation abilities. International competitiveness is related to the current status and directions of changes of the real and institutional component of international competitive capability of a given country in competing for the benefits from participation in the international division of labour (Misala, 2011). Contrary to competitive capability and competitive advantage, which are dynamic in nature, competitive position is a static notion. The term denotes the status and changes in the share of a specific country in the generally understood international trade, i.e. in the international trade of goods and services and the international flows of production factors, and also the evolution of the structure of this type of

trade, including the respective quality changes. It should also be mentioned that all the above concepts of competitiveness and their shaping factors are closely interrelated. An improvement of competitive capability and competitive advantage translates into an enhanced competitive position.

Bossak (1987; as cited in: Pawlak and Poczta 2011) among factors determining international competitive capability of a country mentions external and internal factors; internal factors include changes in economic potential, changes in management effectiveness and the innovativeness of the economy. The sources of competitive advantage enumerated by Bossak include relatively low production costs, high degree of processing, high quality, brand, high innovativeness, management quality and flexibility, and strong network connections. Tesch (1980; as cited in: Bossak 1987, Pawlak and Poczta, 2011) points to several supply factors, among which advantages related to the use of economies of scale. Economies of scale occur when, as a result of trade specialisation and trade development, production series increase, which leads to lowering the unit costs of production thanks to reducing the frequency of adjusting the production model, increasing the labour productivity of employees and distributing fixed costs into more units. The factors determining the production capacity of an economy according to Bienkowski (2008), Kasztelan (2015, 2016), Nowak and Kaminska (2016) are the volume of natural resources, inherited assets and the level and efficiency of economic infrastructure, the effectiveness of the labour force and the capital, and the level of technology. In its report, the European Commission (1996) put forward a pyramid of international competitive capability and international competitiveness factors. Labour productivity is almost at the top of the pyramid, at the same level as the employment rate, with the living standard occupying the top.

In strictly theoretical terms, there are four types of competitive advantage sources (Misala, 2011): 1) the degree of technological advancement – creating conditions for business entities in a given country at a particular development level to specialise in the production and exports of products that can be used at a relatively lower cost than partners from other countries; 2) using the advantage of having in place the basic production factors by creating conditions for various entities to use the varying resource-intensiveness of these factors to their benefit; 3) the use by primary business entities of the diverse preferences of domestic and foreign business entities (consumers and investors) and creating favourable conditions therefor; 4) the obtaining by primary business entities of various economies of scale in the area of production and sales.

In the literature on the subject, the issue of selecting appropriate measures to assess international competitiveness is being widely discussed. Taking the competition method criterion as the starting point, it is possible to distinguish the following measurement methods: quantitative and cost-price measures, price and non-price competitiveness measures, measures considering only the effects of price and non-price competitiveness from the perspective of the current account balance, traditional economy competitiveness measures and the technological and innovativeness measures of the so-called new economy (Bombińska, 2002; Jagiełło, 2003; Pawlak, Poczta, 2011). Developing the current account balance is an important measure assessing international competitiveness, which can also be applied to measuring the competitive position. The current account balance can be affected by saving rates, capital flows from abroad, relative economic growth, consumer import spending, exchange rate, relative inflation rate and productivity (Gossé et al., 2014; Gourdon, 2009; Kennedy et al., 2005; Mocossi, 2016; Navrátil, 2016). Productivity and labour productivity are becoming particularly important factors of international competitiveness and international competitive position measures with the current account balance in the event when a given country loses its influence on competitiveness with the use of exchange rate changes, which is the case for euro-area countries which adopted the common currency, with the exchange rate of euro being

determined by the European Central Bank. The above is confirmed by the assumptions of classical and neoclassical theories (David Ricardo's theory of comparative costs, Heckscher-Ohlin's factor endowments theorem) and neotechnology theories (the economies of scale of production and sales theory), on the basis of which labour productivity can be considered as an important factor determining competitive position measured with the current account balance.

It should be emphasised that numerous authors define international competitiveness using the notion of productivity. For instance Porter (1990) claims that the only possible concept for a country's competitiveness is developing national productivity. Oughton and Whittam (1996) define international competitiveness as "long run growth in productivity and hence rising living standards, consistent with increasing employment or the maintenance of near full employment, while Pajarinen, Rouvinen, Ylä-Antilla (1998) describe international competitiveness as the ability of a nation state to continuously attract high value-added activities of private enterprises world-wide in such a way that all factors of production are fully employed and earn high returns, and the long-term external balance of payments of the country is maintained. Aiginger and Landesman (2002) distinguish four levels of international competitiveness: the first level denotes a country's ability to increase per capita income in a given period by increasing productivity and labour force. Higher competitiveness levels are associated with the permanence of the process, the provision of a social security system for citizens, environmental protection, sustainable growth and economic development and the appropriate level of the citizens' quality of life and lifespan (as cited in: Misala, 2011).

According to Glick and Rogoff (1995) and Bussière et al. (2010) productivity shocks specific for a given country are one of the major factors impacting the current account balance. A temporary productivity shock boosts production and has a positive impact on the current account balance. The expected outcome of a permanent, long-term increase in productivity is a decrease of the balance on the current account because: 1) higher return on investment increases the capital; and 2) projecting higher future profits decreases savings. Although productivity shocks may potentially improve the current account balance, as pointed out by Bagnai and Manzonchi (1999), the general impact will be generally negative (Gossé et al., 2014). Dependencies between changes in the current account balance and labour productivity were also noticed by Mucha-Leszko and Twarowska (2015), who pointed to the special significance of achieving international competitiveness using labour productivity and unit labour costs in the absence of the possibility of taking advantage of exchange rates by euro-area countries.

## **2. Problem Formulation and Methodology**

The objective of the study is to analyse correlations between changes in the current turnover account balance and labour productivity in European Union countries after introducing euro in 1999, with a particular consideration of the 2008 – 2009 economic crisis, and to evaluate these two economic variables in euro zone countries in comparison to non-euro-area countries. The following research hypothesis was investigated in the study: changes in labour productivity correlate with changes in the current account balance.

The analysis employs variables calculated on the basis of data from the Eurostat database: real labour productivity per person employed – percentage change on previous year and current account balance calculated as percentage of Gross Domestic Product (GDP) (Appendix). The analysis covered the years 1999-2016.

In order to identify the correlations and dependencies between changes in the share of the current account balance in the GDP and the labour productivity change rate, the correlation analysis and the cluster analysis based on the k-means method were applied. The calculations were carried out with the use of the STATISTICA software.

### 3. Problem Solution

The correlation result between the current account balance as percentage of GDP and real labour productivity as percentage change on previous year were presented in Table 1. A positive correlation, where the increase in the value of one characteristic is accompanied by an increase in the mean value of the other characteristic was observed for Italy (IT), Spain (ES), France (FR), Luxembourg (LU), the Netherlands (NL), Finland (FI), Denmark (DK), Malta (MT), the United Kingdom (GB), Belgium (BE) and Ireland (IE). A negative correlation, where an increase in the value of one characteristic occurs with a drop in the mean value of the other characteristic was recorded for Lithuania (LT), Hungary (HU), Estonia (EE), Latvia (LV), Slovakia (SK), the Czech Republic (CZ), Portugal (PT), Romania (RO), Slovenia (SI), Austria (AT), Bulgaria (BG), Greece (GR), Poland (PL), Croatia (HR), Cyprus (CY), Sweden (SE) and Germany (DE). Table 1 presents countries grouped by the strength of correlations.

**Table 1: Correlation Coefficients Between Current Account Balance (%GDP) and Labour Productivity per Person Employed (% change on previous year) in 1999-2016**

Strength of the correlation		Countries and correlation coefficients	
Range of correlation coefficient	Interpretation of correlation coefficient	1999-2016	1999-2016 (except 2008, 2009)
-1 to -0.6	significant relationship (high)	LT (-0.65), HU (-0.62)	EE (-0.62), LT (-0.78), HU (-0.68), SI (-0.65), SK (-0.67)
-0.6 to -0.4	important relationship (moderate)	EE (-0.47), LV (-0.4), SK (-0.53)	HR (-0.45), LV (-0.52), NL (-0.58), PL (-0.58), PT (-0.47),
-0.4 to -0.2	explicit relationship (low)	CZ (-0.34), PL (-0.3), PT (-0.28), RO (-0.23), SI (-0.26), AT (-0.27),	CZ (-0.39), IT (-0.25), CY (-0.31),
-0.2 to 0	no relationship	BG (-0.07), DE (-0.05), GR (-0.03), HR (-0.02), CY (-0.08), SE (-0.07)	BG (-0.14), AT (-0.15), RO (-0.19)
0 to 0.2	no relationship	IT (0.04)	DE (0.06), FR (0.14), SE (0.16)
0.2 to 0.4	explicit relationship (low)	ES (0.2), FR (0.27), LU (0.21), NL (0.24), FI (0.36)	DK (0.24), GR (0.3), ES (0.39), LU (0.24), MT (0.3)
0.4 to 0.6	important relationship (moderate)	DK (0.46), MT (0.44), GB (0.52)	FI (0.51)
0.6 to 1	significant relationship (high)	BE (0.71), IE (0.74)	BE (0.66), IE (0.74), GB (0.78)

Source: author's calculations

It is worth considering the change in the strength of correlations between the analysed variables when excluding the economic crisis years (2008 and 2009) from the analysis. The strength of the correlations changes significantly for 18 out of 28 EU Member States. The negative correlation increased for Estonia, Slovenia, Slovakia, Croatia, the Netherlands, Poland, Portugal and Italy, and dropped for Romania and Austria. In the case of countries which recorded a positive correlation, the exclusion of the years of the economic crisis had a varying impact on the strength of correlations between the analysed variables. The correlation coefficient grew for the United Kingdom, Finland, Spain, and Greece, and also for Germany and Sweden; however, for the latter two the correlation was insignificant. In turn, in the case of Denmark, Malta and France the strength of correlations weakened. In the period of the economic crisis, non-euro-area countries could improve their international competitiveness through exchange rate changes. Such an option was not available for euro-area countries, which needed to improve the competitiveness of their exports by increasing labour productivity and/or reducing unit labour costs. The strategy was applied in particular by Southern European countries such as Spain, Italy and France, and the Baltic Sea countries: Latvia, Estonia and Lithuania.

**Table 2: Elements of Clusters and Distance from the Centre of the Clusters**

Cluster 1		Cluster 2		Cluster 3		Cluster 4	
Element	Distance	Element	Distance	Element	Distance	Element	Distance
DK	1.202703	BG	3.964906	BE	0.913685	EE	2.073538
DE	1.511162	GR	2.288827	CZ	1.701120	IE	2.177333
LU	3.853350	CY	2.293192	FR	1.244787	ES	1.284980
MT	2.636867	LT	1.182820	IT	1.655102	HR	1.059615
NL	1.545753	RO	3.245787	FI	2.477880	LV	2.230548
AT	2.050821	x	x	GB	2.789936	HU	3.088670
SE	2.013504	x	x	x	x	PL	1.547186
x	x	x	x	x	x	PT	2.878646
x	x	x	x	x	x	SI	1.890266
x	x	x	x	x	x	SK	2.176804

Source: author's calculations

Using the k-means method made it possible to group the countries into four clusters on the basis of the ratio for the share of the current account balance in GDP and the labour productivity change rate. The elements of particular clusters and distance from the centre of the respective clusters are presented in detail in Table 2. The descriptive statistics for particular clusters are included in Table 3.

**Table 3: Descriptive Statistics of Individual Clusters**

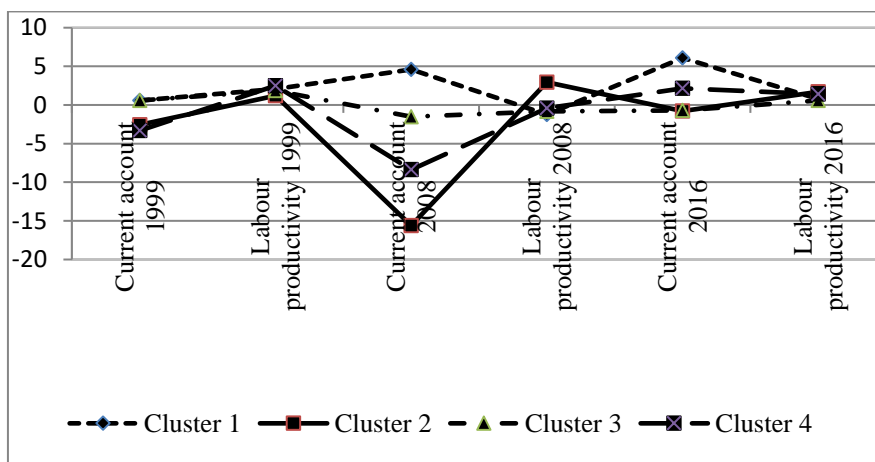
Variable	Average				Standard deviation				Variance			
	1	2	3	4	1	2	3	4	1	2	3	4
Number of cluster	1	2	3	4	1	2	3	4	1	2	3	4
Current account 2016	6.09	-0.78	-0.72	2.17	2.42	3.74	2.93	2.36	5.86	13.97	8.60	5.57
Labour productivity 2016	0.77	1.70	0.58	1.40	0.67	2.65	0.66	1.12	0.45	7.01	0.43	1.26
Current account 2008	4.61	-15.60	-1.52	-8.38	3.05	3.86	2.26	2.37	9.30	14.92	5.13	5.61
Labour productivity 2008	-1.23	2.94	-0.82	0.43	2.19	3.84	0.77	2.55	4.80	14.74	0.59	6.51
Current account 1999	0.58	-2.58	0.57	-3.30	3.87	1.67	3.22	2.99	14.95	2.77	10.36	8.96
Labour productivity 1999	2.07	1.20	1.85	2.49	0.91	1.96	1.10	1.52	0.83	3.83	1.22	2.31

Source: author’s calculations

Figure 1 shows that the variable determined by the share of the current turnover account balance in GDP in 2016 contributes to the differences between countries, which means that in particular groups of countries it was at varying levels, with the highest value recorded for countries in cluster 1 – approx. 6.09; for cluster 4 the value of this variable was 2.17, and for clusters 2 and 3 the value was at a similar level. The labour productivity change rate in 2016 does not seem to be significant in the respective clusters. The figure demonstrates that its value is at a similar level in all clusters, i.e. 0 or slightly above 0.

The current account value in 1999 is similar in clusters 1 and 3 (amounting to, respectively, 0.58 and 0.57) and in clusters 2 and 4 (equalling, respectively, -2.58 and -3.29). The current account value in 1999 would divide countries into two clusters if other variables were disregarded, i.e. clusters 1 and 3 and 2 and 4 were each combined into one cluster Labour productivity in 1999 was at a very similar level in all clusters, and its overall level was slightly above zero, oscillating from 1.2 to 2.49. The variable also seems insignificant, i.e. on its basis it is not possible to divide the analysed countries into clusters.

**Figure 1: The Average Current Account Balance and Labour Productivity of each Cluster**



Source: own elaboration, basing on Table 3.

Figure 1 demonstrates that the highest cluster variability was observed for the current account from 2008, with the highest value (4.61) for countries in cluster 1, followed by -1.52 for cluster 3 and -8.38 for cluster 4, and the lowest value of the variable was recorded for cluster 2 (approx. -15.6). Labour productivity in 2008 was the highest for cluster 2 and equalled approx. 2.94, which clearly distinguishes the cluster from other clusters, where it is at a comparable level, with values from -1.23 to -0.43.

#### 4. Conclusion

The most stable cluster with the lowest fluctuations of the analysed variables of the share of the current account balance in GDP and the labour productivity change rate is cluster 3, which includes the following EMU countries: Belgium, France, Italy and Finland, and non-euro-area countries: the United Kingdom and the Czech Republic. The most diverging values of the analysed variables were observed in cluster 2, to which the following countries were assigned: Bulgaria, Greece, Cyprus, Lithuania and Romania. In these countries labour productivity is increasing and the current account rate is dropping, which may be associated with an influx of foreign capital and the exports growth rate being not as dynamic as the production increase, possibly resulting from a failure to adjust the sales package of these countries to international market needs. An opposite tendency can be observed for cluster 1, which included Denmark, Germany, Luxembourg, Malta, the Netherlands, Austria and Sweden, with a slight decrease of the labour productivity index and a rise of the current account rate. These countries experienced the lowest decline of their international competitiveness measured with the current account rate during the economic crisis, which can be explained with generally high labour productivity levels in these countries, where even a slight decrease of the rate does not lead to losing international competitiveness. In cluster 4, including Poland and Central and Southern European countries, the labour productivity index decreased slightly between 1999 and 2008, and rose slightly in average terms in the following time period. International competitiveness for countries from cluster 4 measured with the current account rate dropped in the year of the economic crisis, and increased significantly after 2008. This group of countries encompasses such euro-area countries as Ireland, Slovenia, Portugal, Spain, and Latvia and Estonia. Poland is among the countries which raise their international competitiveness through labour productivity, which can be viewed positively in the context of preparations to accession to the Economic and Monetary Union. The specified groups of countries and the correlation analysis show that the correlation between changes in the labour productivity index and the current account balance is not equal for all the analysed countries. On the basis of the analysis it is not possible to conclude that the EMU countries are a separate group in terms of the directions and degree of changes and the correlations between the analysed variables as compared to non-euro-area countries.

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#### References

- [1] Aiginger, K. and Landesmann, M. (2002). Competitive Economic Performance: USA versus EU. *Austrian Institute of Economic Research (WIFO)*: Research Reports, No. 291, pp. 1-88.

- [2] Bagnai, A. and Manzoocchi, S. (1999). Current Account Reversals in Developing Countries: the Role of Fundamentals. *Open Economy Review*, vol. 10, pp. 142-163.
- [3] Bombińska, E. (2002). Wybrane mierniki pozycji konkurencyjnej kraju. *Zeszyty Naukowe Akademii Ekonomicznej w Krakowie*, vol. 575, pp. 5-17.
- [4] Bussiére M., Fratzscher M. and Müller G. J. (2010). Productivity Shocks, Budget Deficits and the Current Account. *Journal of International Money and Finance*, vol. 29, pp. 1562-1579.
- [5] Eurostat (2018). *Statistics* [online]. [cit.2018-02-22]. Available at: <http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/themes>.
- [6] Glick, R. and Rogoff, K. (1995). Global versus Country – Specific Productivity Shocks and the Current Account. *Journal of Monetary Economics*, vol. 35, pp 159-192.
- [7] Gossé, J. B. and Serranito, F. (2014). Long-run Determinants of Current Accounts in OECD Countries: Lessons for intra-European Imbalances. *Economic Modelling*, vol. 38, pp. 451-462.
- [8] Gourdon J. (2009). Explaining Trade Flows: Traditional and New Determinants of Trade Patterns. *Journal of Economic Integration*, , vol. 24 (1), pp. 53-86.
- [9] Jagiełło, M. (2003). Wskaźniki międzynarodowej konkurencyjności gospodarki. *Studia i Materiały*, vol. 80. Warszawa: IKCHZ, p. 41.
- [10] Kasztelan A., (2015). Natural Capital as a Factor in Regional Competitiveness. *Miscellanea Geographica*, vol. 19, Issue: 3, pp. 63-69.
- [11] Kasztelan, A., (2016). Green Competitiveness of the EU Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 415-424.
- [12] Kennedy, M. and Slok, T. (2005). Structural Policy Reforms and External Imbalances. *OECD Economics Department Working Papers*, No. 415. Paris: OECD Publishing.
- [13] Micossi, S. (2016). Balance – of – Payments Adjustment in the Eurozone. *CEPS Policy Brief*, No. 338, pp. 1-13.
- [14] Misala, J. (2011). *Międzynarodowa konkurencyjność gospodarki narodowej*. Warszawa: PWE, p. 26.
- [15] Mucha-Leszko, B. and Twarowska, K. (2015). Problem nadwyżek i deficytów na rachunkach obrotów bieżących krajów strefy euro. *Zeszyty Naukowe Uniwersytetu Szczecińskiego. Studia i prace Wydziału Nauk Ekonomicznych i Zarządzania*, No. 41, t. 3, pp. 185-197.
- [16] Navrátil, B. (2016). Ever – Closer or Multi-Speed Union. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 649-655.
- [17] Nowak A., Kaminska A., (2016). Agricultural competitiveness: The case of the European Union countries. *Agricultural Economics – Zemledelska Ekonomika*, vol. 62, Issue: 11, pp. 507-516.



- [18] Oughton Ch. and Whittam, G. (1996). Competitiveness, EU Industrial Strategy and Subsidiarity. In *Subsidiarity and Industrial Policy*. London: Routledge, pp. 58-103.
- [19] Pajarinen M., Rouvinen, P. and Ylä-Anttila, P. (1998). Small Country Strategies in Global Competition. Benchmarking the Finish Case. *ETLA B: The Research Institute of the Finish Economy*.
- [20] Pawlak, K. and Poczta, W. (2011). *Międzynarodowy handel rolny teorie konkurencyjność scenariusze rozwoju*. Warszawa: PWE, p. 62.
- [21] Porter, M., E. (1990). *The Comparative Advantage of Nations*. New York: Free Press.

### Appendix 1

#### Real Labour Productivity per Person Employed in EU Countries in 1999 – 2016 (Percentage Change on Previous Period)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BE	2.2	1.6	-0.6	2	0.9	2.6	0.6	1.4	1.8	-1	-2.1	2.1	0.4	-0.2	0.5	0.9	0.5	0.2
BG	-1.8	7.5	4.6	5.7	2.1	3.7	4.3	3.4	4	3.6	-1.9	5.4	4.2	2.6	1.3	1	3.3	3.4
CZ	3.7	5.1	3.2	1	4.4	5.1	4.5	5.4	3.4	0.5	-3.1	3.3	2.1	-1.2	-0.8	2.2	3.8	1.3
DK	2.1	3	-0.2	0.4	1.3	3.2	0.9	1.6	-1.4	-1.7	-1.8	4.3	1.4	1	1	0.6	0.3	0.3
DE	0.4	0.7	2	0.5	0.4	0.8	0.7	2.9	1.5	-0.2	-5.7	3.8	2.3	-0.7	-0.1	1.1	0.8	0.6
EE	3.8	9.6	5.7	6.1	5.2	6.7	6.9	5.1	7.5	-5.2	-5	7.6	1	2.6	0.7	2.1	-1.2	1.8
IE	3.9	4.9	2.6	4.7	1.2	3.2	1	0.9	0.8	-3.3	3.5	6.1	3.6	0.6	-0.9	6.5	22.5	2.3
GR	3	3.6	3.8	1.4	4.3	2.6	-0.3	3.8	1.9	-1.6	-3.8	-3	-2.4	-1.1	-0.6	-0.2	-1	-0.7
ES	-0.1	0.3	0.6	0.3	-0.1	-0.6	-0.5	0	0.5	0.9	2.9	1.8	1.7	1.1	0.9	0.4	0.7	0.7
FR	1	1.3	0.5	0.7	0.8	2.7	0.9	1.3	0.9	-0.3	-1.8	1.9	1.3	-0.1	0.3	0.5	0.8	0.5
HR	:	:	4.1	4.3	3	3.2	3.1	1.6	1.9	-0.1	-6.7	2.4	3.7	1.4	2	-2.7	1.1	2.9
IT	0.5	1.7	-0.2	-1.4	-1.3	1	0.4	0	0.2	-1.3	-3.9	2.3	0.3	-2.5	0.1	0	0.3	-0.3
CY	2.9	4	1.4	1.3	-1.1	0.6	0.1	2.6	0.4	0.3	-1.8	0.8	0.3	0.1	0	0.4	0.5	-0.1
LV	4.5	9.1	4.8	5.6	7.8	8.1	9.7	5.8	5.9	-2.7	-0.1	2.9	4.8	2.5	0.3	3.3	1.4	2.4
LT	1.1	8.5	10.7	3	8.1	7.7	6.9	7.7	8.9	4	-7.7	7.3	5.5	2	2.1	1.5	0.7	0.4
LU	3.5	2.8	-3	0.9	-0.2	1.2	0.4	1.3	3.8	-5.8	-5.4	3	-0.4	-2.7	1.8	3.1	0.3	0
HU	0.4	3.2	4	4.6	3.8	6	4.7	3.4	0.3	2.9	-4.2	1.8	1.7	-1.8	1	-0.6	0.9	-0.4
MT	:	:	-1.1	2.7	2.9	0.1	2.5	0.3	1.7	0.8	-2.5	1.8	-1.5	0.1	0.8	2.9	3.1	1.7
NL	2.1	2.4	0.2	-0.6	0.8	3.2	1.5	1.3	0.7	0.1	-2.9	2.1	0.8	-0.9	1	1.5	1.3	1.1
AT	2	2.4	0.5	1.7	0.3	2.1	1	1.7	1.9	-0.4	-3.3	1.1	1.3	-0.4	-0.3	-0.1	0.5	0.2
PL	:	:	3.5	5.2	4.8	4	1.3	2.9	2.4	0.4	2.4	6.4	4.4	1.5	1.5	1.5	2.3	2.3
PT	2.3	1.6	0.2	0.4	0	2.5	1.2	1.2	2.5	-0.2	-0.3	3.4	0.1	0.1	1.8	-0.5	0.4	-0.1
RO	0.8	3.2	6.7	17.1	5.6	10.2	5.8	7.3	6.5	8.4	-5.2	-0.5	1.9	5.7	4.4	2.3	5.3	5.5
SI	3.7	2.6	2.4	2.2	3.2	4	4.5	4	3.5	0.7	-6.1	3.4	2.4	-1.8	0	2.6	1	1.2
SK	2.4	3.2	2.7	4.4	4.3	5.5	5.1	6.2	8.5	2.3	-3.5	6.7	1	1.6	2.3	1.3	1.8	0.9
FI	1.9	3.4	1.1	0.6	1.9	3.3	1.2	2.2	3	-1.5	-6	3.7	1.3	-2.3	0	-0.2	0.1	1.4
SE	2.4	2.2	-0.5	2	3	5.1	2.5	2.9	1.1	-1.4	-2.8	5	0.5	-1	0.3	1.2	3	1.5
GB	1.8	2.5	1.7	1.6	2.3	1.3	2	1.4	1.5	-1.3	-2.6	1.4	0.9	0.4	0.9	0.7	0.6	0.4

Source: own calculations basing on Eurostat database.

## Appendix 2

## Current Account Balance in EU Countries in 1999-2016 (Percentage of Gross Domestic Product GDP)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BE	:	:	:	:	3.5	3.3	2.1	1.9	2	-1	-1.1	1.8	-1.1	-0.1	-0.3	-0.9	-0.1	0.1
BG	-4.6	-5.3	-5.4	-2.4	-5.3	-6.4	-11	-17	-24	-22	-8.3	-1.7	0.3	-0.9	1.3	0.1	0	5.3
CZ	-2.3	-4.4	-4.8	-5.1	-5.7	-3.7	-2.1	-2.5	-4.6	-1.9	-2.3	-3.6	-2.1	-1.6	-0.5	0.2	0.2	1.1
DK	:	:	:	:	:	:	4.2	3.3	1.4	2.9	3.5	6.6	6.6	6.3	7.8	8.9	8.8	7.3
DE	-1.4	-1.7	-0.4	1.9	1.4	4.5	4.6	5.7	6.7	5.6	5.7	5.6	6.1	7	6.7	7.4	8.5	8.3
EE	-4.3	-5.4	-7.1	-11	-13	-12	-8.7	-15	-15	-8.7	2.5	1.8	1.3	-1.9	0.5	0.3	2	1.9
IE	0.2	0.6	0.2	0.2	0.5	-0.1	-3.5	-5.4	-6.5	-6.9	-5.6	-2	-2.4	-2.6	2.1	1.6	10.9	3.9
GR	:	:	:	-6.8	-8.5	-7.7	-8.9	-12	-15	-15.1	-12	-11	-10	-3.8	-2	-1.6	-0.2	-1.1
ES	-3.3	-4.4	-4.4	-3.7	-3.9	-5.6	-7.5	-9	-9.6	-9.3	-4.3	-3.9	-3.2	-0.2	1.5	1.1	1.1	1.9
FR	3.4	1.2	1.5	1.2	0.9	0.4	0	0	-0.3	-1	-0.8	-0.8	-1	-1.2	-0.9	-1.1	-0.2	-0.9
HR	:	-2.3	-3.1	-7.2	-6.1	-4.3	-5.3	-6.6	-7.3	-9	-5.3	-1.2	-0.8	-0.2	1	2	4.4	2.4
IT	1.1	0.1	0.5	-0.3	-0.6	-0.3	-0.9	-1.5	-1.4	-2.8	-1.9	-3.4	-3	-0.3	1	1.9	1.5	2.7
CY	:	:	:	:	:	-5.1	-6	-8.2	-12	-15.5	-7.7	-11	-4.1	-6	-4.9	-4.3	-1.5	-4.9
LV	:	-3.8	-6	-5.4	-7.1	-12	-12	-21	-21	-12.3	7.8	2.1	-3.2	-3.6	-2.7	-1.7	-0.5	1.4
LT	:	:	:	:	:	-7.6	-7.3	-11	-16	-13.6	1.4	-1.3	-4.6	-1.4	0.8	3.2	-2.8	-1.1
LU	8	12.6	8.3	9.3	6.5	12	11	9.9	9.7	7.6	7.2	6.7	6	5.6	5.5	5.2	5.1	4.8
HU	-7.9	-8.5	-5.8	-6.3	-8	-8.5	-7	-7	-7.1	-7	-0.8	0.3	0.8	1.7	3.8	1.5	3.4	6.1
MT	:	:	:	:	:	-3.7	-6.5	-6.6	-1.9	-1.1	-6.6	-4.7	-0.2	1.7	2.7	8.8	4.6	6.6
NL	:	:	:	:	:	7.7	7.1	9.2	7	5	5.5	7	8.7	10.3	9.9	8.6	8.7	9
AT	-2.3	-0.7	-0.8	2.1	1.5	2.1	2.3	3.3	3.8	4.5	2.6	2.9	1.6	1.5	1.9	2.5	1.9	2.1
PL	:	:	:	:	:	-5.5	-2.6	-4	-6.3	-6.7	-4	-5.4	-5.2	-3.7	-1.3	-2.1	-0.6	-0.3
PT	-8.9	-11	-10	-8.5	-7.2	-8.3	-9.9	-11	-9.7	-12.1	-10	-10	-6	-1.8	1.6	0.1	0.1	0.7
RO	-4.2	-3.8	-5.6	-3.4	-5.9	-8.3	-8.6	-10	-14	-11.8	-4.8	-5.1	-4.9	-4.8	-1.1	-0.7	-1.2	-2.1
SI	-3.3	-2.8	0	0.9	-0.8	-2.7	-1.8	-1.8	-4.1	-5.3	-0.6	-0.1	0.2	2.1	4.4	5.8	4.4	5.2
SK	:	:	:	:	:	-10	-11	-9.5	-5.9	-6.5	-3.4	-4.7	-5	0.9	1.9	1.1	-1.8	-1.5
FI	5.2	7.5	8.1	8.2	4.6	5.8	3	3.8	3.8	2.2	1.9	1.2	-1.8	-1.9	-1.6	-1.3	-1	-1.4
SE	3.9	4	4.7	4.5	5.9	6	6.1	8.2	8.2	7.8	6	6	5.5	5.6	5.3	4.6	4.7	4.5
GB	-2.6	-2.4	-2.1	-2.2	-1.9	-2.4	-2.1	-3.1	-3.8	-4.6	-3.9	-3.8	-2.4	-4.2	-5.5	-5.3	-5.2	-5.9

Source: own calculations basing on Eurostat database.

## **European Union and the Faroe Islands: Possibilities for Closer Trade Relations**

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### **Abstract**

*The aim of this paper is to investigate possibilities for closer EU–Faroe Islands trade relations. The Faroe Islands are an autonomous part of the Danish Kingdom which, due to a number of reasons, chose to remain outside of the European integration project when Denmark sought full membership in the 1960s–70s. Today, the Faroes remain outside of the EU Single Market, as well as the Customs Union, trade relations with the EU being governed by a decades-old Free Trade Agreement. This poses significant impediments to the small and undiversified Faroese economy (though the structure of the economy evolves) and causes the Faroese to look for markets elsewhere – including, perhaps unexpectedly, in Russia. Possibilities for closer trade relations with the EU include a modernized FTA, EFTA/EEA membership and full EU membership. Economic, legal and political aspects are taken into account using SWOT analysis. It is argued that enhanced bilateral or multilateral preferential trade regime (free trade agreement) better corresponds to the Faroese specificity of size and political status, while EFTA membership provides added value mainly in symbolic terms.*

**Keywords:** *European Free Trade Association, European Union, Faroe Islands, trade relations*

**JEL Classification:** *F13, F15, H77*

### **1. Introduction**

The Faroe Islands have been, and still are, an intriguing territory for an academic, many definitions in all sorts of areas falling short of describing its status. For instance, they are considered to be part of Europe politically, but they are far from its physical shores. They are part of the Danish Kingdom, but in fact not entirely due to a specific autonomous status. They are part of an EU member state, but they are not part of the EU themselves. And many similar irregularities may be identified.

At the same time, these 18 islands and rocks inhabited by some 50 thousand Faroese attract only limited attention outside the Nordic region. It could be argued that this situation is unjustified and more interest is warranted – both for economic and political reasons. From the economic perspective, a booming (even though small) economy, overlooked by many, could be of interest to many Central European actors - the presence of Polish construction companies, witnessed on site by the author during his field trip in 2017, as well as the historical Faroese-Polish free trade agreement (Government of the Faroe Islands [online], 2018b) prove, that there might be interesting economic perspective in Faroese-Central European relations. Some economic developments in the Faroese context could even have unexpected political connotations. When the European Union approved restrictive measures against Russia in 2012

after the Crimean and Donbas crises, the Faroe Islands as a non-EU country, unrestricted in its trade relations, profited. The Faroese export to Russia tripled in terms of percentage of exports and reached some 24% in 2017 (compared to 44% in case of exports destined to the EU-28 countries!) (Statistics Faroe Islands [online], 2018). Political consequences might not be self-evident, but should not be easily dismissed in times of social media and political instability in the West. Especially if one considers the difficult relations between the autonomous Faroe Islands and its sovereign state Denmark (Hořejšová, 2006, p. 12), an EU and NATO member (plus the interesting geographical position of the Faroes in Northern Atlantic Ocean).

The above-outlined justifies a closer look on Faroese-EU trade relations. As stated above, the situation of the Faroe Islands is far from simple and schematic, therefore, after a short theoretical overview, the third chapter will provide a short summary of the status quo and a brief historical perspective. Then, possibilities for the future will be considered, ranging from an enhanced free trade agreement regime, through EFTA and EEA membership, all the way to full EU membership. These possibilities will be analysed using SWOT analysis, with economic, legal and political aspects being taken into account. The paper is based on Faroese sources, which include interviews with local administration and scholars, and international secondary literature.

## 2. Theoretical Approaches to Small Entities in the International Arena

The performance and even the existence itself of small entities in the international arena attracts academic attention. This is true mainly for small *states*, however, in the context of this paper, the Faroe Islands can be treated as such, even though they lack full sovereignty, since they enjoy an almost all-encompassing autonomous status in economy issues (except perhaps for the annual block grant from Denmark, which gets smaller every year (Hořejšová, 2006, p. 13)). Several authors looked at their specific problems that are derived from their small size - such as undiversified economy, small home market or inability to attain efficient scale of output (Kuznets, 1960; Tarshis, 1960). Some argued, though, that international trade relations, if arranged properly, are able to tackle these issues and provide a way for sustainable economic development of small states (Marcy, 1960; Scitovsky, 1960; Triffin, 1960). Clive Archer and Neill Nugent (2002) then looked at the specificity of small states' relationship with the EU, though it is important to say, that they focused mostly on bigger entities, than the likes of the Faroe Islands (especially the Benelux states). In any case, the small state specificity is being studied also in the context of the EU.

Perhaps most importantly, in the context of this paper, is Harvey Armstrong and Robert Read's (1995) study on the economic performance of micro-states (a specific sub-category of small states, in their article mainly Andorra, San Marino and Monaco, which are similar in size to the Faroe Islands). They compared the performance of these micro-states and of similarly big autonomous entities (Gibraltar, the Channel Islands, and also the Faroe Islands), which all have in common that they are not (fully) part of the EU, with the economic performance of neighbouring regions of EU member states. Armstrong and Read argue, that micro-states and non-EU autonomous regions (such as the Faroes) do better in GDP growth and unemployment terms, than neighbouring EU regions. However, they do not provide a conclusive answer to what the reasons are. In any case, though, their non-EU membership, combined with a favourable trade regime seem to play an important role (Armstrong and Read, 1995, p. 1239).

### 3. Faroe-EU Relations Before and Nowadays

As indicated above, the Faroe-EU relations are far from simple in terms of structure. This stems primarily from the Faroese status within the Danish realm, as well as from the Faroese economy structure. The Faroe Islands have been part of Denmark for centuries, though a specific culture, distant from the Danish one, developed in the course of the 19<sup>th</sup> century (Solvará, 2016, pp. 9–25). This led to calls for greater autonomy, which culminated during the Second World War, when Denmark was occupied by Nazi Germany and the Faroe Islands, due to an extremely important geographical position, by Great Britain – as part of what is sometimes called “friendly occupation” (Solvará, 2016, p. 141). The Brits allowed the Faroese to govern themselves freely (Ackrén and Lindström, 2012, p. 500), which led to even greater sense of distinctiveness and, after the War, referendum on independence. In the referendum in 1946, a slight majority voted for independence, though Denmark was not in position to grant it and the results were overruled by Danish legislation on autonomy (Arter, 2008, p. 41). Since then, a sensitive relationship exists between Denmark and the Faroe Islands, characterized by an ever increasing level of autonomy, without openly disputing the sovereignty issue (Hořejšová, 2006, pp. 12–15). The sovereignty issue is, however, present in Faroese politics as one of the political dividing lines (Adler-Nissen and Gad, 2014, p. 13) and enters into many issues, including the trade agenda where the Faroese authorities have wide autonomy.

The Faroe Islands became part of EFTA in the 1960s, together with Denmark. In 1973, though, when Denmark opted for EEC membership, the Faroe Islands followed Denmark out of EFTA, but chose not to enter the EEC. Since then the islands remain outside the European integration project that is today the European Union, while Denmark is a full member (although with some opt-outs). This step was motivated mainly by economic reasons – the Faroese economy is very dependent on fisheries and fish and fish products account for over 90% of Faroese exports. Thus, the Common Fisheries Policy of the EU would have catastrophic consequences for the island nation (Brunclík et al., 2011, p. 231).

Since mid-1970s until 1991, trade relations between the EEC and the Faroe Islands were governed by various transitional and unilateral measures, the main idea of which was, on the one hand, to provide legal framework for the specific situation (Denmark was in the EEC, thus the Faroese-Danish trade was in fact Faroese-EEC trade), while on the other hand, to allow Faroese fish and fish products exports without which the Faroese economy would collapse. In 1991, a Free Trade Agreement came into force between the EC and the Faroe Islands. The FTA covered exports of industrial goods and fish and fish products to the EEC. This treaty was replaced by a new one from 1998 and was last amended in 2008. The main concept of Faroese-EU trade remains, although restrictions and tariffs were further cut (Faroese Ministry of Foreign Affairs, 2010, pp. 21–24). For several decades, then, the Faroe Islands are able to export products listed on a “positive list” of the FTA, such as fish, some fish products and industrial goods, largely duty- and quota-free to the EU market. EU goods are allowed to enter virtually freely to the Faroese market, with some specific protective measures existing in sectors sensitive for the Faroese economy. Other segments of trade (mainly services, but also capital) are not covered (Government of the Faroe Islands [online], 2018a).

For a complete overview, it can be added that beyond FTA, the Faroe Islands have a specific fisheries agreement with the EU, a veterinary protocol allowing for harmonisation and mutual recognition of phytosanitary standards and an agreement covering cooperation in research (providing access to FP7/Horizon 2020) (Government of the Faroe Islands [online], 2018b). The Faroese-EU relationship thus remains on an ad hoc basis both in legal and political, as well as in practical terms – there is no structured all-encompassing Faroese-EU dialogue, as a

desk officer at the Faroese Ministry of Foreign Affairs and Trade confirmed to the author during an interview. Possibilities for the future are nevertheless being considered in Torshavn (some have been discussed in (Faroese Ministry of Foreign Affairs, 2010)).

#### **4. Possibilities for Faroe-EU Trade Relations in the Future**

The existing Free Trade Agreement of 1998 (amended in 2008) governs trade in goods, mainly the ones crucial for the Faroese economy. The logic of the agreement, though, based on a fixed positive list of products covered, is very rigid and slowly reaching its limits. From a Faroese perspective it conserves the undiversified structure of the economy or, from a different perspective, fails to include growing sectors of the economy, such as services. From the EU perspective, the Faroe Islands might be forced to look elsewhere for markets, which may not be dangerous in narrow economic terms (the Faroese economy and exports are relatively small), but may be unfortunate in political consequences – the above-outlined steep growth of Russia-destined exports are an obvious example.

For the Faroese, at the same time, the issue of foreign (trade) relations is part of the larger picture of Danish-Faroese dynamic, with the Faroese trying to emancipate themselves and establish themselves as part of the international (trade) community (Adler-Nissen, 2014, p. 57). Economic factors thus cannot fully grasp the complexity and political factors need to be taken into consideration. This must be done in two ways. One needs to look at the political “inputs” – the political and legal possibilities of the Faroese to upgrade their trade relations in their current status within Denmark; as well as the “outputs” – how politically meaningful a future trade solution is in the wider process of the Faroese emancipation (both vis-a-vis Denmark and in terms of the international community).

Since the Faroe Islands are a rather small economy, it is difficult to imagine that a specific ad hoc type of trade regime would be introduced. It is more likely that existing structures would be considered. In this logic, possible future trade regimes, ranging from less to more ambitious are: 1) an enhanced bilateral free trade agreement, 2) entering into EFTA and/or EEA, 3) becoming a member of the EU.

##### ***4.1 Enhanced Free Trade Agreement***

Under enhanced FTA regime fall many possibilities of bilateral trade regimes having many possible levels of ambition. One can imagine a “classic” free trade agreement, only covering a wider range of exports in goods (longer “positive list”, alternatively an FTA covering “all but several products”, or even a customs union-type agreement) or a new-generation deep and comprehensive FTA covering goods (including regulatory issues), as well as services and capital (such as CETA).

The main strength of the enhanced FTA regime in the above-outlined mutations, is that it is relatively easy to negotiate in terms of administrative and expert capacity (which is an issue in terms of a 50 thousand-strong population, see e.g. (European Commission [online], 2012), while providing an important gain in economic terms (the more ambitious the treaty, the bigger the potential gains) and respecting the specificity of Faroese needs in the fishing sector. At the same time, the possibility is virtually non-problematic from the legal perspective – the Faroe Islands have the constitutional and legal authority (under the autonomy regime) to conclude trade agreements (Government of the Faroe Islands [online], 2005). On the other hand, regarding the weaknesses, it would be only minor change in terms of the Faroese emancipation.

Also, the regime would continue to be solely focused on trade and other areas of interest for the Faroese (such as research cooperation) would still need to be specially negotiated.

From the external point of view, Denmark would likely be in a position to support the Faroese claim for an enhanced FTA, and in principle it should not be difficult for the EU to negotiate and approve deeper trade relations with a European territory. At the same time, though, the risk persists, that the EU would not be willing to liberalize mutual trade in sectors that some EU member states regard as sensitive. Also, given the natural asymmetry of Faroese-EU relationship, it is likely that more liberal trade rules from the EU side would only be granted in exchange for enhanced access of EU fishing vessels into the Faroese waters.

To provide a comprehensive picture, a specific trade regime should also be mentioned. The EU is in the process of negotiating one or more association agreements with European micro-states of Andorra, Monaco and San Marino (Council of the European Union [online], 2014). These specifically-tailored association agreements are to have an ambitious trade component. Such regime would likely encompass all the above-mentioned strengths, while adding another – a very important symbolic one. If the Faroe Islands were included in talks in this structured format, it would be a huge symbolical step in emancipation – the Faroe Islands would be seen as being on equal footing with other small, but by-all-means sovereign states. Plus, as Armstrong and Read (1995, p. 1239) have shown, an association to the EU in case of these micro-states often correlates with above-average macro-economic performance. Also, the association agreement would surely cover more than only trade, which is both a strength (as seen above) and a weakness. The Faroese authorities might not have all the competences they would need to conclude such an agreement. Also, Denmark might not be willing to see its autonomous territory being treated alongside sovereign micro-states, which is an obvious threat tied to this scenario. Given that the talks are on-going, it is also unlikely that there would be an easy way for the Faroe Islands to enter them. In a longer-term perspective, though, a given structure for relations between the EU and micro-states (if there is one), might further reduce potential administrative “costs” of the Faroese, if they decided to adopt a similar agreement later.

#### **4.2 EFTA/EEA Membership**

Another possibility for the Faroe Islands to integrate closer with the EU, than through an FTA, but short of full membership, is the model two other Nordic countries chose – the membership of the European Economic Area. Historically, the EEA was conceived as a way to integrate EFTA countries with EC/EU countries (Brunclík et al., 2011, p. 227). To be part of the EEA, one needs to be either part of the EU, or a member of EFTA (EFTA [online], 2016). That is why this possibility will be taken as a combined possibility of EFTA and EEA.

The EEA is in fact a solution for countries wishing to enjoy the benefits of the EU Single Market, without committing to all (non-Single Market) aspects of the EU. That is why it often shows up also with regard to post-Brexit UK (Ševčíková, 2016, p. 962) For the Faroe Islands, EEA membership would mean a vast widening of commercial relations, since the EEA countries enjoy rights of free movement of goods, services, capital and people (EFTA [online], 2016). This would be a big impetus for the Faroese economy. Also, the Faroese would become part of a multilateral economic integration organisation, which would be an important step in their emancipation. At the same time, the crucial economic sector of fishing would be unaffected, since the EEA does not entail participating in the EU Common Fisheries Policy. An obvious weakness of EEA membership is the generally acknowledged disadvantage of EFTA EEA members, who need to adopt EU legislation without the possibility of forming it (Brunclík et al., 2011, p. 227). Also, specifically for the Faroes, EEA membership would mean

a significant increase in administrative capacity needs. And last but not least, EEA is again mainly an economic organisation and the Faroe Islands have interest in deeper cooperation in other areas as well – which EEA membership would not entail automatically.

From the external perspective, the stance of Denmark would likely be ambivalent. On the one hand, under the current Home Rule Act, the Faroe Islands would be able to become member of EFTA. This is true even given that only states can become members of EFTA – the Faroe Islands could become a member without needing to open the sensitive sovereignty question (i.e. without becoming an independent state per se). A specific formula of “Denmark in respect of the Faroe Islands” could in principle be utilized (Faroese Ministry of Foreign Affairs, 2010, p. 27). However, in the current legal situation, the Faroes could not become party to the EEA Agreement, since Denmark already is and, as postulated by the Home Rule Act, the Faroe Islands cannot become member of an organisation of which Denmark already is member (Government of the Faroe Islands [online], 2005). Thus EFTA membership could be possible, but EEA membership not.

EFTA membership in itself cannot be seen as a way for the Faroe Islands to integrate more closely with the European Union. But this eventuality should not be easily dismissed. EFTA is a multilateral free trade regime with free movements of goods, services, capital and people among its members. Moreover, two out of its four current members – Norway and Iceland, are close trade partners of the Faroe Islands. Currently, the Faroese have an FTA with Norway and a comprehensive economic partnership agreement with Iceland (Government of the Faroe Islands [online], 2018a). Membership in this organisation would make economic sense. Also, EFTA groups smaller countries with relatively small administrations and thus this aspect need not be entirely problematic for the Faroese. One should also not forget the free trade agreements that EFTA as an organisation has concluded with third countries – this could be a big impetus for the Faroese economy. And EFTA membership might serve as a good capacity-building exercise for the inexperienced Faroese foreign and trade office, which in itself might open new ways for closer EU-Faroese relations in the future.

The threat in this relatively optimistic assessment may be the stance of other EFTA members, who might not be willing to let another member in, as was illustrated in a different context when possibilities for the UK after Brexit were discussed (Dagenborg, 2017).

### ***4.3 EU Membership***

To benefit the most from EU membership advantages, the Faroe Islands may consider the possibility of entering the EU. Due to a specific status of the Faroes, two modalities exist. The Faroese could either declare that they wished to become part of the EU under the Danish EU membership. In contrast, the Faroes could seek independent Faroese EU membership. These two options need to be analysed separately.

#### ***4.3.1 Faroes as Part of Danish EU Membership***

The option of EU membership via Denmark is, in practical terms, the simplest possibility to achieve. A deal would need to be made with Denmark on the practical matters and then Denmark would need to negotiate with the EU a ways to include the territory of the Faroe Islands under the regime of the EU treaties. This is a relatively easy solution, where the majority of administrative work would be carried out by the Danish authorities. It would mean full economic integration within the EU, also with access to non-economic programmes, which



are of interest for the Faroese. Externally, one could imagine that both Denmark and the EU would be willing to support the Faroese in this matter.

However, there are several weaknesses of this solution. First and foremost, the Faroe Islands would be participating in the Common Fisheries Policy, which is perceived as potentially disastrous for the Faroese fishing industry. Also, in symbolic terms, this would be regarded as a huge step back in the Faroese emancipation project – having been making gradual steps towards self-rule, the Faroes would in an instant become very much closer to Denmark (Faroese Ministry of Foreign Affairs, 2010, pp. 41–42).

#### *4.3.2 Independent Faroese EU Membership*

This solution would be more complicated than the one discussed above, but other than that, it would bring similar benefits of full EU integration. Also, it can be imagined that the Faroese would be able to ask for specific opt-outs of some EU policies, thus assuring the best membership regime.

From the perspective of both weaknesses and threats, though, this solution is very problematic. Administrative capacity is an obvious weakness that could only hardly be tackled. The Faroese autonomous administration comes nowhere near the theoretical needs of an EU member. Equally importantly, the EU or some of its member states might not be willing to support the Faroese claim for EU membership.

Most importantly, since only states may apply for EU membership (and having in mind that under the current Home Rule Act, the Faroes cannot enter an organisation where Denmark is member), the sovereignty issue in the Danish-Faroese relationship would need to be solved first. It is needless to say, that this is an extremely sensitive issue, which is present in the Faroese political life, as well as in Danish-Faroese relations, for decades and no quick solution is foreseen (Hořejšová, 2006, pp. 12–15).

## **5. Conclusion**

On the lines above, we have tried to provide an overview of the Faroese possibilities to gain a closer trade relationship with the European Union. Typologically, the following possibilities were considered: an enhanced bilateral preferential trade regime, membership in a multilateral organisation with access to the EU market and full EU membership. Each of these possible solutions, furthermore, showed a level of complexity. Enhanced bilateral preferential trade regime could also be part of a more comprehensive solution that the EU is currently seeking with the European micro-states. The multilateral solution, that was investigated (the EEA) provided an interesting possible “by-product” (EFTA membership without accession to the EEA) that on the one hand does not answer the need for closer trade relations with the EU, but at the same time could serve as a meaningful first step in that direction. Paradoxically, full EU membership still appears to be the least complicated solution, when considered as part of the Danish EU membership.

It must be accentuated, however, that the Faroese situation goes beyond simple economic terms. The Faroese political and public discourse has for decades been characterized by the sensitive issue of Faroese-Danish relationship. The Faroe Islands are an autonomous region, the current legal framework provides for possibilities to acquire ever more powers and the eventuality of full secession from Denmark is actually quite realistic. Even more so in good economic times, such as is the case nowadays. This topic inevitably enters into the seemingly economic debate of Faroese-EU trade relations, and not only at the academic level.

The issue of eventual secession is a political divide cutting across the political arena, as well as the society (Adler-Nissen, 2014, p. 56). One could argue, that ever since the Second World War, the topic is present and it periodically resurfaces with renewed strength. This was the case in 1999 when the Republican Party government commissioned a draft constitution for the Faroe Islands that is today still under consideration and the most recent government plans to submit the draft to the people in a referendum in April 2018 (Posaner, 2017). As Joan-Pauli Joensen, chair of the committee tasked to draft the constitution in 1999, confirmed to the author during an interview, the draft is a compromise between the pro-secession and pro-union halves of the political and societal spectrum, but goes too far according to Denmark. Denmark is willing to “let the Faroes go”, but their economic sustainability is questionable, considering the annual Danish grant to the Faroese budget (Hořejšová, 2006, p. 14).

This is where the topic of Faroese external trade relations resurfaces. Closer trade ties with the EU, followed by an increase in mutual trade, i.e. increased economic growth, could be a solution for the substitution of the ever-diminishing Danish grant (even though the public discourse does not regard these things as connected, as civil servants of the Faroese authorities confirmed to the author during interviews). This would be in line with the theoretical assumptions, with a number of authors arguing that in fact integration into a wider economic bloc could be a way to ensure sustainable development of such small entity (see Marcy, 1960; Scitovsky, 1960; or Triffin, 1960). At the same time, though, one should keep in mind Armstrong and Read’s (1995, p. 1239) finding that micro-entities on the outskirts of the EU are empirically better off, than their counterparts inside the EU. One could argue, then, that closer economic ties with the EU in the form of an enhanced bilateral or multilateral (together with other European micro-states) trade regime is in fact preferable to EU membership in the case of the Faroe Islands. Though this issue has not been strongly supported by empirical analysis and requires further research.

From the EU perspective, enhanced preferential trade regime for the Faroe Islands does not seem controversial. This is mainly due to the small scale of the Faroese exports in absolute terms, when compared to the EU market. On the other hand, the EU would perhaps avoid the possible future political (and even security) repercussions brought about by the recent partial reorientation of the Faroese exports to Russia. Moreover, the integration into the eventual multilateral regime (together with the other European micro-states) would bring more coherence into EU trade relations. And not least, free trade promotion and lifting of barriers on the market is part of the EU “DNA” and the EU proposes to do so even in case of such micro-entities (European Commission [online], 2012). Despite the seemingly modest consequences in the EU.

At the same time, the interesting “by-products” of EFTA membership bring also this possibility into the equation. True, EFTA is probably not strong enough economic bloc, as to ensure the sustainability of the Faroese economy (even though this is purely an intuitive assumption and future research could suggest otherwise). However, EFTA membership would be a symbolic step in the Faroese pursuit of sovereignty and would serve as a school for the so far inexperienced local civil servants. It comes as no surprise, then, that EFTA membership is being seriously considered by the new Faroese government (Government of the Faroe Islands [online], 2015).

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## References

- [1] Ackrén, M., Lindström, B. (2012). Autonomy development, irredentism and secessionism in a Nordic context. *Commonwealth & Comparative Politics*, vol. 50, iss. 4, pp. 494–511.
- [2] Adler-Nissen, R. (2014). The Faroe Islands - Independence dreams, globalist separatism and the Europeanization of postcolonial home rule. *Cooperation and Conflict*, vol. 49, iss. 1, pp. 55–79.
- [3] Adler-Nissen, R., Gad, U.P. (2014). Introduction: postimperial sovereignty games in the Nordic region. *Cooperation and Conflict*, vol. 49, iss. 1, pp. 3–32.
- [4] Archer, C., Nugent, N. (2002). Introduction: Small States and the European Union. *Current Politics and Economics of Europe*, vol. 11, iss. 1, pp. 1–10.
- [5] Armstrong, H. W., Read, R. (1995). Western-European Micro-States and the EU Autonomous Regions – The Advantages of Size and Sovereignty. *World Development*, vol. 23, iss. 7, pp. 1229–1245.
- [6] Arter, D. (2008). *Scandinavian Politics Today*. Manchester: Manchester University Press.
- [7] Brunclík, M., Havlík, V., Pinková, A. (2011). *Skandinávie: proměny politiky v severských zemích*. Praha: Wolters Kluwer.
- [8] Council of the European Union (2014). *Council adopts mandate to negotiate association agreement(s) with Andorra, Monaco and San Marino* [online]. [cit.2018-03-09]. Available at: <https://www.consilium.europa.eu/media/24876/146317.pdf>.
- [9] Dagenborg, J. (2017). *Norway PM casts doubt on temporary British EFTA membership* [online]. [cit.2018-03-09]. Available at: <https://www.reuters.com/article/us-britain-eu-norway/norway-pm-casts-doubt-on-temporary-british-efta-membership-idUSKCN1AU1FE>.
- [10] EFTA (2016). *Agreement on the European Economic Area* [online]. [cit.2018-03-09]. Available at: <http://www.efta.int/media/documents/legal-texts/eea/the-eea-agreement/Main%20Text%20of%20the%20Agreement/EEAagreement.pdf>.
- [11] European Commission (2012). *Communication from the Commission: Relations with the Principality of Andorra, the Principality of Monaco and the Republic of San Marino: Options for Closer Integration with the EU* [online]. [cit.2018-03-09]. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0680:REV1:EN:HTML>.
- [12] Faroese Ministry of Foreign Affairs (2010). *The Faroes and the EU: possibilities and Challenges in a Future Relationship*. Torshavn: Ministry of Foreign Affairs.
- [13] Government of the Faroe Islands (2005). *The Foreign Policy Act* [online]. [cit.2018-03-09]. Available at: <http://www.government.fo/en/foreign-relations/constitutional-status/the-foreign-policy-act/>.
- [14] Government of the Faroe Islands (2015). *Annex to the Coalition Agreement between the Social Democratic Party (Javnaðarflokkurin), Republican Party (Tjóðveldi) and Progressive Party (Framsókn)* [online]. [cit.2018-03-09]. Available at: <http://www.government.fo/en/the-government/coalition-agreement/annex/>.

- [15] Government of the Faroe Islands (2018a). *Free Trade Agreement* [online]. [cit.2018-03-09]. Available at: <http://www.government.fo/en/foreign-relations/missions-of-the-faroe-islands-abroad/the-mission-of-the-faroese-to-the-european-union/the-faroe-islands-and-the-european-union/free-trade-agreement/>.
- [16] Government of the Faroe Islands (2018b). *The Faroe Islands and the European Union* [online]. [cit.2018-03-09]. Available at: <http://www.government.fo/en/foreign-relations/missions-of-the-faroe-islands-abroad/the-mission-of-the-faroese-to-the-european-union/the-faroe-islands-and-the-european-union/>.
- [17] Hořejšová, T. (2006). Diskuse o budoucím statutu Faerských ostrovů - posilování autonomie, či nezávislost? *Pražské sociálně vědné studie*, Teritoriální řada TER-019.
- [18] Kuznets, S. (1960). The economic growth of small nations. In Robinson, E. A. G. (ed.). *The Economic Consequences of the Size of Nations*. London: Macmillan, pp. 14–32.
- [19] Marcy, G. (1960). How far can foreign trade and customs agreements confer upon small nations the advantages of larger nations? In Robinson, E. A. G. (ed.). *The Economic Consequences of the Size of Nations*. London: Macmillan, pp. 265–281.
- [20] Posaner, J. (2017). *Faroe Islands to vote on constitution paving way for independence* [online]. [cit.2018-03-09]. Available at: <https://www.politico.eu/article/faroe-islands-to-vote-on-constitution-paving-way-for-independence/>.
- [21] Scitovsky, T. (1960). International trade and economic integration as a means of overcoming the disadvantages of a small nation. In Robinson, E. A. G. (ed.). *The Economic Consequences of the Size of Nations*. London: Macmillan, pp. 282–290.
- [22] Solvará, H. A. (2016). *The Rise of Faroese Separatism*. Torshavn: Faroe University Press.
- [23] Statistics Faroe Islands (2018). *Statbank* [online]. [cit.2018-03-09]. Available at: <http://www.hagstova.fo/en/statbank>.
- [24] Ševčíková, M. (2016). Analysis of the Main Causes of Brexit and its Potential Consequences. In *3rd International Conference on European Integration 2016*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 961–969.
- [25] Tarshis, L. (1960). The size of the economy and its relation to stability and steady progress. In Robinson, E. A. G. (ed.). *The Economic Consequences of the Size of Nations*. London: Macmillan, pp. 190–199.
- [26] Triffin, R. (1960). The size of the nation and its vulnerability to economic nationalism. In Robinson, E. A. G. (ed.). *The Economic Consequences of the Size of Nations*. London: Macmillan, pp. 247–264.

## Environmental Sustainability Management on the Example of Selected European Cities

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### Abstract

*Sustainable development is today a non-separate element of environmental policy, socio-economic policy and various socio-economic strategies of the European Union. At a time when the majority of citizens live in cities or urban areas sustainable development is a fundamental principle that should accompany assumptions of smart cities. The URBAN Program supports this activity through the social and economic development of cities, districts and urban areas in crisis. The Europe 2020 strategy intensifies the implementation of activities in the long term, to make it possible, an action plan must be based on a thorough analysis of the needs of residents and the possibilities of the ecosystem. The current European Union policy has a certain collegial elements that connect protective environments, management of non-renewable natural resources or aimed to keep forethought. However some extent these aspects still remain a challenge for the future.*

**Keywords:** *environmental problems of cities, Raport Brundtland, sustainable development, the Europe 2020 strategy, the URBAN Program*

**JEL Classification:** *Q57, P20, R11*

### 1. Introduction

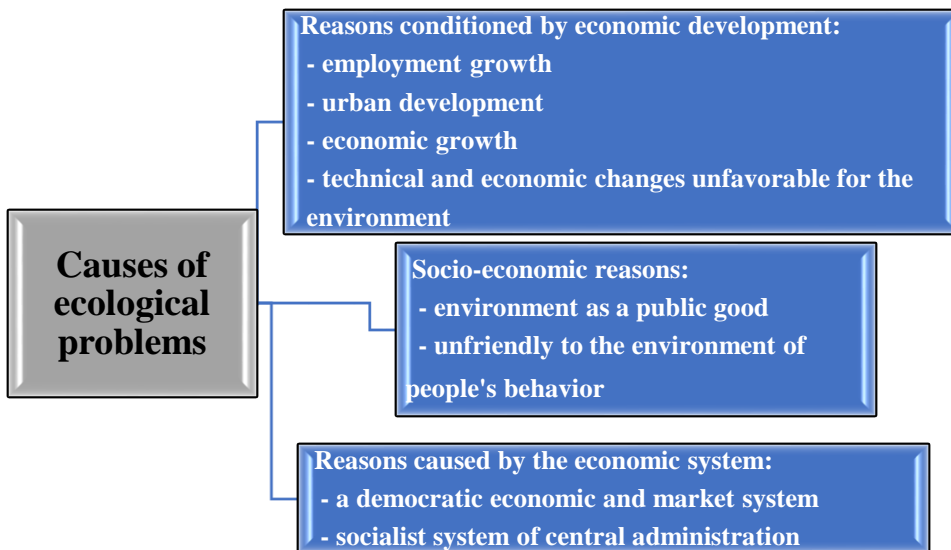
Sustainable development is today a non-separate element of environmental policy, socio-economic policy and various socio-economic strategies. The precursors of the concept of sustainable development are derived from classical economics: D. Ricardo, T.Malthus, J.S. Mill. However, the original definition was formulated in 1987 in the report: *Our Common Future* (cited Brundtland's report): "Sustainable development is a development aimed at satisfying the developmental aspirations of the present generation in a way that allows the same aspirations to be pursued by future generations" (Kramer M., Urbaniec M., Kryński A., 2004). These aspirations, however, must take into account many aspects of development. In the modern sense, sustainable development is particular interest of: ecological economics, environmental economics or other related disciplines. However, considering the approach to sustainable development in relation to the Brundtland report, it raises some doubts (Jeżowski, 2007). In particular in the aspect of perceiving needs, social justice or limitations imposed by the natural environment of the city. Europe, in its geographic and political diversity, provides

us with numerous examples of cities that can be put forward as models for managing sustainable development. The study analyzed the current practice of managing the sustainable development of the city Gdańsk, located in the north of Poland and Copenhagen, the capital of Denmark, which is a precursor of the model use of environmental assets. The aim of this study is to present ecological problems of European cities on the example of Gdańsk and Copenhagen and their action strategy for smart and sustainable development in accordance with the European Union policy for environmental protection.

### 1.1 Environmental Problems of Cities

The quality of the natural environment in large cities, and thus the living conditions since the late 1960s, became the subject of public discussion. Every day, each of us encounters ecological problems, it is no novelty. However, news are the more and more serious threats to human existence. They result from ecological problems of global reach, they are mainly: acid rain, ozone hole, greenhouse effect, soil and water contamination by various metals, salts or insects. In principle, three categories can be distinguished that have a causal relationship with an impact on the natural environment.

**Figure 1: Causes of Ecological Problems**



Source: Own elaboration based on: Meffert H., Kirchgeorg M.(2001): *Marktorientiertes Umweltmanagement*, Stuttgart 1998 s.10, Graap T.: *Nachhaltigkeit und Kooperation: zum Verständnis eines Leitbildes und Handlungstyps in einer komplexen Welt*, Berlin 2001 p.30.

The first of the reasons is conditioned by the development indispensably linked to population growth. In 1950, the number of individuals in the world from the homo sapiens species was 2 billion, in 1980 it doubled to 4 billion (Koch, Czogal 1999), while in 2014 their sum was 7 billion 137 million 577 thousand 750 people, increasing by 77 million compared to 2013 (Changes on Earth online). The population is growing rapidly and is becoming a problem of developing countries, as a result of which cities are undergoing intensive transformation. This state of affairs is reflected in the number of urban residents in the world since the beginning of the 19th century, where the world's population accounted for 2.5%, rises to around 25% in

1960, to reach 51% of the Earth's population in 2006. However, this situation is constantly changing and as the forecasts indicate, the share of urban residents in 2030 will exceed 60% of the world's population. However, the population growth increases the problems. They are manifested by the use of soil during the production of food, resulting in expansion of arable land, increased energy consumption and ultimately the emergence of an increased amount of municipal waste. This increase reveals the destruction of the environment, so how to solve environmental problems arising through the quantitative effect of population growth and economic progress? By reducing the consumption of raw materials and the decrease in pollution generated as a result of production and consumption (Koch, Czogal 1999). The second problem resulting from the causes of ecological problems are socio-economic reasons. Their character results from the disposition of environmental goods and their use in production processes or consumption for free, the emergence of external effects (negative effects) and the maintenance of economic entities to the environment (Schmid, 1996). The last reason for ecological problems is the so-called causes conditioned by the economic system. Their germ lies in market-democratic economy systems, where the maximization of income by enterprises leads to negligence in favor of environmental protection. Therefore, one should look carefully at the aspects of ecological problems, paying attention to the obligation of sustainable development by taking into account the necessary environmental protection requirements in enterprises.

## **2. Problem Formulation and Methodology**

This research attempts to analyze the significance of European Union activities in the field of social development of cities, urban areas and urban districts in accordance with the concept of sustainable development. Global ecological problems faced by contemporary European cities are discussed in detail. An analysis of the sustainability management strategy practiced by these agglomerations was conducted on the example of Gdańsk and Copenhagen.

The aim of this study is to present ecological problems of European cities on the example of Gdańsk and Copenhagen and their action strategy for smart and sustainable development in accordance with the European Union policy for environmental protection. In order to present the problem, a monographic method was selected that primarily considers information in the form of a qualitative and descriptive form and serves to illustrate the effectiveness / improvement / innovation or development forecasts of a specific entity (urban agglomerations here). The article has a theoretical and research character. In the first part of the article, the authors identify the concept of sustainable development and present environmental problems arising through the quantitative effect of population growth and economic progress. The importance of EU actions to protect the environment by promoting ecological and sustainable development of cities are emphasized. The second part justifies the issue, comparing the ecology management policy in Gdańsk and Copenhagen. The article is based on Polish and foreign language literature in the field of sustainable development management and the analysis of national and European documents in this thematic scope.

## **3. EU Cooperation in the Field of Sustainable Urban Development**

The importance of the European Union in terms of finance, economy and business is unquestionable and definitely places EU among the power of the world (Kana, Mynarzova, 2015). One of the Community Initiatives of the European Union aimed at the social development of cities, districts and urban areas that may be in a crisis or reducing negligence for environmental protection has become the URBAN program. As part of the program,

activities aimed at innovation and social development of cities were proposed. During the implementation of the two editions of the program, funding was achieved at the level of 1 billion 703 million euro. On the other hand, the priorities set for the European Regional Development Fund under the second objective were: "environmental protection measures, including reclamation of contaminated sites, stimulation of energy efficiency, promotion of ecological and sustainable urban public transport". The ERDF program solved numerous economic and environmental problems with which societies struggled every day.

Another strategy for smart and sustainable development is the Europe 2020 strategy, which includes three interrelated priorities:

- a. Intelligent development: development of a knowledge-based economy and innovation;
- b. Sustainable development: supporting a more resource efficient, more environmentally friendly and more competitive economy;
- c. Inclusive growth: supporting a high-employment economy that ensures social and territorial cohesion (Communication from the commission EUROPE 2020).

The above goals have become interlocked, thanks to which the effectiveness of one of them translates into an increase in the chances of others. Of course, it raises many questions, both from political, military or economic areas on which the EU can focus in the near future (Kana, Mynarzova, 2012).

#### **4. Implementation of the Sustainable Development Policy**

Environmental pollution, climate change, the fuel or energy crisis, as well as the resulting losses in biodiversity contribute to the search for new global solutions that will contribute to the possibilities of sustainable development. They are an indispensable challenge for citizens and policy-makers who, at various levels from international, through national, regional and local, endeavor to solve problems: ecological, economic and social. The concept of sustainable development in Poland was introduced in 1991 by setting the most important goals of sustainable development. However, it was not until 1995 that a resolution on the policy of sustainable development was adopted (Kramer M., Urbaniec M., Kryński A, 2004). The principle of sustainable development itself has been included in the Constitution of the Republic of Poland in 1997, in art. 5 together with other important state issues including: independence and inviolability of the territory, freedom and rights of man and citizen (Constitution of the Republic of Poland). The Brundtland report was therefore the beginning of the implementation of the concept of "sustainable development" in line with the principle of global environmental policy and development (Wagner, 1997).

The most important point of the conference was the implementation of the Agenda 21 document. Under which, in many European cities, sustainable development began to be implemented through activities supported by the public, non-governmental organizations and other pressure groups. Due to local activities related to Agenda 21, many Polish cities begun work on introducing sustainable development, including in the city of Gdańsk. The city is located in the north of Poland, by the Baltic Sea. It is ranked sixth in Poland in terms of population (456,977 inhabitants) and also sixth in terms of size - 261.96 km<sup>2</sup> (The number of city dwellers is decreasing [online]). It enjoys prosperous maritime trade, productive industry and well-developed tourism. Implementation of Agenda 21 was initiated in Gdańsk in 1990 by adopting: "Equal development policy for the city". Gdańsk initiated the implementation of Agenda 21 at the local level through activities aimed at short, medium and long-term goals, each of them being fully implemented. The first of them were already achieved within 5 years - until 1995 as a result of which the quality of drinking water was improved, sewage treatment plants were built, emissions from refineries were monitored or waste and ash were removed



from the power plant. The medium-term goals were achieved within 8 years - until 1998 through further activities for the disposal of sewage and waste, improvement of the status of surface water together with the water protection areas, as well as ensuring sufficient capacity of landfills. As a result, the "mountain of waste" in the city of Gdansk has been reduced by 30%. The implementation of long-term goals was profiled for actions spread over a longer period of time, however, not exceeding 12 years - until 2002. These included the reduction of the greenhouse effect by 20% compared to 1990, the co-creation of green areas, the supervision of the groundwater level, and the project to protect species diversity on Sobieszewska Island. Cooperation with the industry also brought measurable benefits in the form of reduction of dust emissions (nitrogen oxide and sulfur to air). However, planted trees and isolated green areas are still enjoying the eye of the inhabitants of the city of Gdańsk (Lokale Agenda 21[online]). Also, current reports on sustainable urban development show the prestigious success of the city of Gdańsk, which is increasingly compared to the Danish city of Copenhagen. The Polish city ranked fourth in the "Policy Insight" ranking in 2016 in terms of: quality of the environment, economic development, society and politics. The report has been prepared for the Polish Foundation of Robert Schuman and the Konrad Adenauer Foundation in Poland. It shows the main advantages of Gdańsk, which include: limited car traffic, including the extension of the zone of slowed traffic to 30 km / h that already exceeds 50% of the city's road network. Environmental quality expressed in the form of lower emission of carbon dioxide (116 tons / ha) with average cities with district rights defined at the level of 118 tons / ha, as well as less gas and dust pollutants below the national average. Other advantages include reduced waste amounting to 186 kg per capita with a national average of 215 kg. However, the minuses of the city of Gdańsk include above-average consumption of electricity - 888 kWh with the national average less by 111 kWh. A good economy is also an advantage of this coastal city, for 10,000. There are 120 new entrepreneurs, which in the final analysis creates 130% of the national average. In terms of road hardening, the city looks quite weak because for 100 km there are only 193 km. However, their condition is constantly being improved and the city budget for the implementation of road investments has allocated as much as 22% of the city budget with the national average of 10%.

The authors of the ranking also appreciate the innovativeness of Gdańsk in terms of building a network of roads and bicycle paths, while giving Gdańsk the nickname of the "cycling capital of Poland". Currently, work is underway on a bicycle rental project that includes leaving the bike at any point in the urban agglomeration, the implementation of which is scheduled for 2018. Currently the city has an impressive network of roads and cycle routes, which total length is 586 km (*Gdańsk how Copenhagen* [online]). In the final analysis, showing the authority of the Polish city compared more and more to a sustainable city like Copenhagen. The capital of Denmark is the most beautiful city on the east of Zealand and Amager. We owe its prestige among many European cities to being one of the most sustainable cities in the world. The capital of Denmark has been fond of the idea of being a city of economically sustainable development that will resolve environmental, economic and social issues. Copenhagen is seen as the "greenest city in the world" according to the Global Green Economy Index (GGEI) published in 2013 (Sustainable Cities: Copenhagen [online]). Its uniqueness is evident in all aspects of life ranging from the environment, the quality of life of residents, and ending with the economic situation of the city. This Danish capital at the heart of its activities has focused on eco-innovation and sustainable development with companies, universities and organizations to develop and implement green development [Laconte, 2012]. Copenhagen is environmentally friendly in many respects, one of its assets should be recycling covering about 90% of all waste, also household waste is re-used because as much as 75% of them are used for heating flats. From 2010 in Denmark, all roofs are inclined at an angle below 30% and must be covered with vegetation. The government apparatus also puts on wind power, until

2020 the city is to produce so much energy that it will be supplied with 50% of its use, creating a self-sufficiency factor of 156% (Sustainable Cities: Copenhagen [online]). The capital of Denmark, just like the city of Gdansk, is leading the way in supporting cyclists. There are over 300 km of bicycle paths in the city, of which every statistical day is over 3 km by bicycle. The implemented model in the field of urban planning shows the effective implementation of bicycle transport goals, which within 5 years from 35%, increased to 50% of people riding a bicycle to work or school. The Danish capital also places restrictions on car traffic in the city center and in designated areas. The capital of this European city can also boast excellent communication in the form of a metro network, city trains, as well as buses powered by electricity. All these activities aim to achieve a neutral state in the balance of CO<sub>2</sub> emissions in 2025 (emission = absorption), (Laconte, 2012).

## 5. Conclusion

Sustainable development has become a global concept staged for the needs and challenges of the developing economies and societies of the nineteenth century. It is not a single and strictly defined category based on ecological and socio-economic activities. However, it is a concept that develops in time and space through differences in value systems. Moreover, it should have certain collegial elements that connect protective environments, management of non-renewable natural resources or activities aimed at preserving foresight. The current European Union policy consolidates to a small extent the actions of sustainable development of cities and villages, to some extent these aspects still remain a challenge for the future.

## References

- [1] Changes on Earth [online]. (cit. 2016-06-10). Available at: <http://zmianyaziemi.pl/wiadomosc/liczba-ludnosci-swiecie-przekroczyla-7-mld-depopulacja-gorszych-nacji-postepuje>
- [2] EUROPE 2020 (2018). *Communication from the commission* [online]. (cit. 2018-03-01). Available at: [http://ec.europa.eu/eu2020/pdf/1\\_PL\\_ACT\\_part1\\_v1.pdf](http://ec.europa.eu/eu2020/pdf/1_PL_ACT_part1_v1.pdf)
- [3] Gdańsk how Copenhagen? Success in the prestigious ranking of cities [online]. (cit. 2016-06-15). Available at: <http://www.gdansk.pl/wiadomosci/Gdansk-jak-Kopenhaga-Sukces-w-prestizowym-rankingu-miast,a,55374>
- [4] Graap, T. (2001). *Nachhaltigkeit und Kooperation: zum Verständnis eines Leitbildes und Handlungstyps in einer komplexen Welt*. Berlin:
- [5] Jeżowski, P. (2007). *Economic problems of environmental protection and sustainable development in the 21st century*. Warszawa: SGH, pp. 100-105.
- [6] Kaňa, R., Mynarzová M. (2012). Interoperability between EU Countries in the Security Area. International Conference on European Integration 2012. Ostrava: VŠB – Technical University of Ostrava, pp. 105-113.
- [7] Kaňa, R., Mynarzová M. (2015). Global Security and the Role of the European Union. *European Business & Management* 2015; 1(2), pp. 25-34.
- [8] Koch, W., Czogal Ch. (1999). *Grundlagen und Probleme der Wirtschaftspolitik*, Köln: Schäffer-Poeschel, pp. 78-79.
- [9] Kramer, M., Urbaniec, M., Kryński, A. (2004). *International environmental management*, Warsaw: C.H. Beck, pp. 114-115.

- [10] Laconte, P. (2012). *Towards Sustainability in European Policies and Achievements at the Level of Individual Cities*, "ISOCARP - Review 08: Towards Sustainability in European Cities".
- [11] Meffert, H., Kirchgeorg, M. (1998). *Marktorientiertes Umweltmanagement*, Stuttgart: Schäffer-Poeschel, pp. 50-53.
- [12] Schmid, U. (1996). *Ökologiegerichtete Wertschöpfung in Industrieunternehmen*, Frankfurt am Main: Schirmer, pp.36-37.
- [13] Sustainable Cities: Copenhagen [online]. (cit. 2016-06-15). Available at: <http://www.emzetes.pl/zrownowazony-rozwoj/art,25,zrownowazone-miasta-kopenhaga.html>
- [14] The Constitution of the Republic of Poland of April 2. (1997). Journal of Laws No. 78, item 483, as amended [online]. (cit. 2016-08-18). Available at: <http://www.sejm.gov.pl/prawo/konst/polski/kon1.htm>
- [15] The number of city dwellers is decreasing [online]. (cit. 2016-06-15). Available at: <http://wybrzeze24.pl/aktualnosci/maleje-liczba-mieszkancow-gdanska>
- [16] Wagner, G.R. (1997). *Betriebswirtschaftliche Umweltökonomie*, Stuttgart: Lucius & Lucius, pp.70-72.
- [17] Lokale Agenda 21 im europäischen Vergleich, Berlin 1999 [online] (cit. 2016-06-15). Available at: <https://www.lernhelfer.de/sites/default/files/lexicon/pdf/BWS-POL-0330-05.pdf>

## **Strategy for the Renewal of the Polish Village with the use of EU Funds on the Example of the Silesian Voivodeship as the Precursor**

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### **Abstract**

*The European Union regulations develop the Rural Development Program for 2014 - 2020+ (PROW 2014-2020 +) and by the year 2030 of the Silesian Voivodeship. In particular, by the Regulation (EU) No 1305/2013 of the European Parliament and of the Council of December 17, 2013, on support for rural development by the European Agricultural Fund for Rural Development (EAFRD). And repealing Council Regulation (EC) No 1698/2005, as well as delegated and implementing acts of the European Commission. This article aims to present a rural management process on the example of innovative activities of the Silesian Voivodeship with the use of EU funds. The authors discuss the implementation of common EU objectives defined in the EU growth strategy "Europe 2020 - a strategy for smart and sustainable development inclusive of social inclusion" taking into account the development needs of the Member State concerned.*

**Keywords:** EAFRD, EU funds, EU growth strategy, management, Silesian Voivodeship

**JEL Classification:** H11, H75, P21

### **1. Introduction**

The development strategy is the process by which the organization focuses on the implementation of the main objectives of survival, development, improvement of living conditions and strengthening of the market position (Skowron-Grabowska, Nowakowska-Grunt, 2017). It is a tool for efficient resolution of economic, social, ecological and spatial problems. It is an instrument supporting the ongoing work of local governments, such as promotion, development of socio-economic plans or investment offers. Having a strategy is a prerequisite for the mobilization of external funds, in particular funds from the European Union (Lokalna Strategia Rozwoju [online], 2018). The development strategy covers all activities aimed at achieving the strategic objectives of the organization in a long-term action.

The development strategy takes into account each of the functions of the management process (planning, organizing, coordinating and controlling) (Fojtíková, Vahalík, and Staníčková, 2016), which focus on tangible, human and financial resources (Porter, 1991). The

development strategy assumes realizing innovative solutions, with a particular precise plan, optimally exploiting the potential of the area and ensuring a balance in all aspects of life (Romanowska, 2015).

The objective of developing a rural development strategy for the Silesian Region of Silesia in the Silesian region by 2020 + was to draw new strategic orientations for the development of rural areas. Municipalities of Silesian Voivodeship in "Development strategies of the Silesian Region 2020 +" (Dahme, Wohlfahrt, 2001) particularly emphasize the dynamic and harmonious development of rural areas, which remain in symbiosis with the environment while maintaining the values Landscape and cultural regions (Krawczyk-Sokołowska, Mesjasz-Lech, Nowicka-Skowron, 2017). The Rural Renewal Program refers to problems that have existed in the region for several years as a result of the economic, cultural and societal revalues of reality (EUROPA 2020 [online], 2018). The regional development strategy is a specific document, especially in the context of the internal diversity of the province, multifunctional and sustainable development of rural areas and the multi-entity shaping of development processes for Rural areas (EUROPA 2020 [online], 2018). On the background of the country, it is a pioneering document defining the operational objectives of the Strategic and key rural development guidelines of the Silesian Region and the project in the perspective of 2030.

This document is overarching with other rural development studies and programs prepared in the Silesian region after 2015 in the following years (PROW 2014-2020 [online], 2018).

The rural development strategy takes into account the working conditions and rural development forecasts of the entire Silesian Voivodeship.

The regional government of Silesia, during the work on the formulation of the Rural Development Program for the period 2014-2020 (RDPS 2014-2020 +) and by 2030 (Rural Development Strategy for the Silesian Province by the year 2030) referred to the regulations of European Union. The program refers to the regulation (EU) No 1305/2013 and of the EU Council's (December 2013) on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and the repealing of Council Regulation (EC) No 1698/2005). Additionally, it includes the regulations from the delegated and executive acts of the European Commission (PROW 2014-2020 [online], 2018).

## **2. Problem Formulation and Methodology**

The paper presents a process for managing rural areas, on the example of innovative activities of the Silesian Voivodeship. It discusses the use of the EU funds to achieve the common EU objectives set out in EU development Strategy "Europe 2020 - a strategy for smart, sustainable development, including social inclusion", taking into account the development needs of the Member State concerned.

The authorities of the Silesian Voivodeship propose in particular the development of awareness of local rural leaders, supporting the strategy of "Investing in people" and promoting actions complementary to other projects of self-government Silesian Voivodeships and national programs.

The authors have used the monographic method to explore the characteristics and elements of a specific structure/system/process (the process of managing the relocation of the countryside) and to identify their nature, functioning, and development. The paper presents the cognitive problem of classification type and explication type. Accordingly, the authors are looking for answers to questions: What direction of changes in the rural management strategy was made

by the regional government of Silesia? What innovative actions do the Silesian authorities take in finding new quality in rural development? The first part of the work presents the literature of the subject, acquainted with the problem in purely theoretical terms. The literature analysis served to determine the facts in the context of the phenomenon. The second part of the work is the empirical part, which presents the results of the study.

The article was written on the canvas of literature studies on the management, organization, and planning of the renewal of the countryside, national and European documents from this thematic scope, analysis of surveys and statistical data collected by the Voivodeship.

### **3. Socio-economic Determinants of the Silesian Voivodeship Including Rural Areas**

Silesian Voivodeship is a region located in the southern part of Poland covering 12 333 km<sup>2</sup> (cities: 3 790km<sup>2</sup>, villages: 8 543 km<sup>2</sup>). The region represents as much as 4% of the country's area. The administrative structure of the Silesian Region consists of 167 municipalities, grouped in 36 counties. Regarding population, the province occupies the second position in Poland (4615.9 thousand people) reaching the highest population rate – for 1km<sup>2</sup> there are 374 people (Lokalna Strategia Rozwoju [online], 2018).

According to the population forecast for 2035 by the Central Statistical Office, the population in the described province is steadily decreasing. The projected decline is highest in Poland and is approximately 482 thousand for years 2015-2035. The data applies to both urban and rural areas.

In Silesian Voivodeship, most of the unemployed are city dwellers (78.0%), in 2012 only five unemployed people resided in rural areas (22.0%). As many as 56% of the unemployed in the countryside holds a professional, secondary and fundamental education (PROW 2014-2020 [online], 2018).

The Silesian Voivodeship embodies the highest density of roads, including highways and expressways in the country, as well as the largest length of the urban transport lines (about 20% of the length of all city lines in Poland) (PROW 2014-2020 [online], 2018).

The province in question is the largest in the country, evenly spread over the rail network, comparable to the European regions. However, its technical condition is disappointing (Porter, 1991). In particular, in the areas of mining exploitation, Silesian Railway infrastructure does not meet any operational standards.

The standard of living for the inhabitants of Silesia, between 2007 and 2012 in the country improved. The number of people in households benefited from environmental; social assistance fell by 14.7% and 20.4% respectively (EFRROW [online], 2018). The share of people using social assistance in the total population in the region (5.4%) was lower than in the country (8.1%). During the same period, there was also a downward trend in the number of families receiving family allowances for children. Social and cultural activity is constantly evolving. Cultural houses, clubs, and dayrooms have been improved, and they are now wheelchair-accessible. Currently, as many as 57.7% of facilities are available for people with mobility impairments. Cultural and entertainment institutions belong to the public organization of culture, which, especially in rural areas, often functions as the only significant organizer of cultural and social life [Lokalna Strategia Rozwoju [online], 2018).

Farmers in the Silesian Voivodeship, in different parts of the region, practice different cultural patterns and ways of management, due to the former administrative divisions of the country

and different historical circumstances. Farms are chipped, not adapted to current market conditions; they indicate very low production space (PROW 2014-2020 [online], 2018). Only 1/5 of the farms produce on the market using significant consumer opportunities in the Silesian agglomeration (Lokalna Strategia Rozwoju [online] 2018).

Due to the absence of professional logistics centers dealing with an agricultural turnover or the trade in breeding material, Silesian farms show very low income. Such situation, in turn, translates into a lack of ability/capital to expand directions of production, change the traditional land use or rebuild and maintain agricultural equipment (Krawczyk-Sokołowska, Mesjasz-Lech, Nowicka-Skowron, 2017).

According to the agricultural census of 2010 in Silesian Voivodeship, there were 163.3 thousand farms. There were 77.6 thousand farms with an area of more than 1 ha of farmland. The Silesian Region, due to its high industrialization, indicates the lowest proportion of agriculture in creating gross value added (Okręglicka, Mynarzová, Kaňa, 2015). Despite the high fragmentation, the number of large farms with an area of 20 – 50 ha (about 21.8%) and the largest farms with 50 hectares and more (41.8%) increased (PROW 2014-2020 [online], 2018). The situation forces the provincial authorities to seek solutions conducive to the economic exploitation of land, i.e., its destination for afforestation purposes, temporary exemptions, the holding of agricultural activities in areas of fragmented agriculture and the preservation of the land in good agricultural culture. The Silesian local government predicts that farms will be less in number, but they will be modern, more automated and with a larger total area. Agriculture in Silesian Voivodeship mainly specializes in the cultivation of vegetables, fruit, poultry and cattle breeding and mushrooms production. The processing sector in the dairy and meat processing industry is also developing.

Although the environmental conditions of rural areas remain with a lot to be desired, due to the poor air quality and the pollution of surface water and groundwater, they still have favorable agri-nature conditions, including favorable agri-climate, the region's potential for energy production from renewable sources in biomass, high biodiversity, and geodiversity.

#### **4. Sources of Aid for the Restoration of Rural Areas in Silesian Voivodeship**

Modernizing and developing rural areas would not be possible without the support of funding from the European Union. The effectiveness of the changes planned in the rural development strategy of the Silesian Voivodeship depends on ensuring adequate sources of funding. The activities of the Silesian Government under the renewal of rural areas pursue two policies: cohesion policy also called regional policy and the common agricultural policy (Kaňa a Mynarzová, 2012). In the years up to 2018, the source of cohesion policy funding was: the Cohesion Fund (CF), the European Regional Development Fund (ERDF) and the European Social Fund (ESF). The implementation of activities under the common agricultural policy was based on aid measures obtained from the European Agricultural Guarantee Fund, the European Agriculture Fund for Rural Development and the European Social Fund Fishing (EFRROW [online], 2018).

Co-financing of the Silesian Rural Renewal Program was also implemented through operational programs managed by the Ministry of Development and the management boards of the voivodeships: Infrastructure and Environment-ERDF Program; Innovative Economy Program - ERDF; Human Capital - ESF Program; 16 regional programs - ERDF; Program Development of Eastern Poland - ERDF; Technical Assistance Program - EFRR; Programs of European Territorial Cooperation – ERDF.

From the comparative analysis of the 2007-2013 funding period on a country-wide basis, the Silesian Voivodeship ranked below the national average regarding aid pool.

The current programming period is covering the years 2014-2020 (RDP 2014-2020) is also co-financed by the foreseen EU funding. The EU budget for aid is an essential source of rural development funding (Melecký, Staníčková, 2014). The RDP 2014-2020 was developed on the basis of the European Union rules – mainly, the regulation (EU) No 305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) (PROW 2014-2020 [online], 2018).

At present, the EU budget (EAFRD) provides funding the renewal of rural areas in Silesia of 8598280814 euros. The national contribution was estimated at 4 915 014 186 euros (PROW 2014-2020 [online], 2018).

The strategy is financed by the funds from loans or other return and non-refundable instruments. For example, money is obtained via the European Investment Bank or the World Bank. Some tasks may also be financed by private funds using public-private partnerships. Today, such solutions can be used to implement public investment, which is strongly supported by the Union (Fojtíková, Vahalík a Staníčková, 2015).

## **5. Pioneering Solutions to the Rural Renewal Strategy in Silesian Voivodeship**

The rural development strategy in the Silesian Voivodeship, developed by the provincial government for the period 2014-2020 and by 2030, is based on 15 main activities that have been adapted to the six priorities of EU policy (PROW 2014-2020 [online], 2018). Priorities are (Lokalna Strategia Rozwoju [online], 2018):

- a. Simplification of knowledge transfer and innovation in agriculture, forestry, and rural areas,
- b. Improving the competitiveness of all types of farming and increasing the profitability of farms,
- c. Improving the organization of the food chain and promoting risk management in agriculture,
- d. Restoring, protecting and strengthening ecosystems dependent on agriculture and forestry,
- e. Promoting resource efficiency and shifting to a low-carbon and climate-resilient economy in the agricultural, food and forestry sectors,
- f. Enhancing social inclusion, reducing poverty and promoting economic development in rural areas.

As it has been already mentioned, together 13 513 295 000 euros of public funds, have been earmarked for the implementation of the intended tasks (PROW 2014-2020 [online], 2018).

In the framework of the RDPs for 2014-2020 realized by the Silesian governments out of 15 activities, three major have been specified (Lokalna Strategia Rozwoju [online], 2018):

- a. Support for investments related to the development, modernization and adaptation of agriculture and forestry (land consolidation) – 24 152 381 euros,
- b. Basic services and village renewal in rural areas (among others for local roads, water and wastewater management and markets) – 33 849 751 euros,



- c. Support for local development within the LEADER initiative, for preparatory actions, for cooperation with the local action group and running costs and activation, as well as the implementation of the local development strategy - 40 929 190 euros.

All the activities undertaken in the field of renewal of the countryside are intended to serve sustainable development, to meet the needs of modern residents without diminishing the opportunities for future generations. The process of change in Silesian Voivodeship should ensure social, economic and environmental sustainability. Sustainable development projects are a reflection of the policies and strategies of continuous economic and social development without compromising on the environment and natural resources, the quality of which depends on the continuation of the activity and further development (Nowicka-Skowron, Krawczyk-Sokołowska, Mesjasz-Lech, 2017).

Aid funding for the 2014-2020 period and 2030 will mainly aim at modernizing and restructuring the Polish agricultural sector in the whole of Silesia. The Silesian authorities have continued to support the reconstruction of agricultural production potential, damaged by natural disasters and disasters, as well as regulating the protection of farms against these types of events. Financial instruments, during the described period, will be allocated in addition to modernizing the agricultural sector, to support young farmers and payments to farmers who decide to transfer small farms to merge fragmented holdings. Projects to be implemented in the framework of land consolidation are designed to improve the area structure of agricultural holdings. Particular emphasis is on diversifying agricultural production and adapting it to market needs as well as regionalization of products. To increase the competitiveness of agricultural areas in the province, it also puts knowledge transfer and advice on every level of agricultural activity. Co-operation will be a pioneer edition instrument in support of the implementation of innovation in the agri-food sector. Support is envisaged to improve the organization of the food chain by investing in the processing and marketing of agricultural goods (Lokalna Strategia Rozwoju [online], 2018). The local government is setting further development of producer groups and organizations and quality schemes for agricultural products and foodstuffs. For the facilitation of direct selling of agricultural goods, it is planned to invest in the construction and modernization of the markets.

The operation of "basic services and rural renewal in the countryside" carries out investments related to the development of technical infrastructure. The result of this type of operation is the construction or modernization of local roads.

Sustainable development is the cohesion of rural areas in economic, social and environmental terms and will, therefore, continue the activities begun in the earlier programming period (2007-2013) contributing to the development Entrepreneurship, the rural development also in the field of technical infrastructure (PROW 2014-2020 [online], 2018). The actions will be implemented both within separate actions and through the action of local development strategies (Leader). Leader aims to strengthen grassroots initiatives in local communities (Lokalna Strategia Rozwoju [online], 2018).

This sector is particularly important regarding sustainable rural development and, therefore, innovative action will be an increase in the market for organic production. The agri-environmental climate action will support environmental measures (including water, soil, landscape) and biodiversity conservation. The aid will be able to benefit farmers using the land in less-favored areas. Investment support for the achievement of environmental objectives shall be granted to farms located in Natura 2000 areas and areas prone to pollution by nitrates from agricultural sources.

The Silesian Voivodeship also struggles with the problem of high pollutant emissions. The work of the local authorities will be directed towards the fight against smog, which is why the ANTISMOG resolution has been implemented (Lokalna Strategia Rozwoju [online], 2018). It is planned through a series of information platforms, conference organizations, developing educational materials to inform locals as smog enters the atmosphere and how it affects our health. Therefore, it is important to use the appropriate fuels, using heating devices that meet the highest standards (Lokalna Strategia Rozwoju [online], 2018).

## 6. Conclusion

Rural areas are an important part of the economy of the Silesian region. They are characterized by a large variety of functional and spatial systems, and their status is important for the living conditions of the population and the possibility of farming and therefore also for the direction and pace of development.

EU agricultural policy 2014-2020 is crucial for ensuring the competitiveness of European agriculture, food security, the sustainable development of agriculture and rural areas and the management of natural resources.

The Strategy for the Development of Rural Areas in the Silesian Voivodeship emphasizes sustainable management methods; sustainable agriculture, organic farming, ecological products. Improving practices, processes, technologies, organization or marketing methods related to production and processing should facilitate the marketing of organic and local products.

Innovation in undertaking actions in the field of rural renewal is to concern all areas of life. These areas will be developed simultaneously by strengthening links between agriculture, food production, and forestry, research and innovation, optimizing environmental management methods. Also, by ensuring the sustainability of agriculture in the face of climate change and natural limitations, improving the sale of agricultural products and strengthening the position of farmers in the food chain. And by improving the quality of agricultural and food products or restoration and preservation of biodiversity and development of technical and social infrastructure in rural areas.

The new instrument for managing the renewal of rural areas is to support innovation, cooperation and the development of knowledge base in rural areas. In the context of knowledge transfer, it is necessary to assign an appropriate role to state higher education institutions. The document shows that the process of knowledge transfer, specific in R & D and innovation is important and must get the support from the public universities and research institutes. The authorities of the Silesian Voivodeship, in a newly developed strategy, take account of the challenges of the modern agricultural policy by engaging in their implementation all the instruments and resources they have. The resources and instruments should improve the competitiveness and efficiency of micro-and agricultural holdings, thereby advance the standard of living for the inhabitants of the region.

In the authors' opinion, a similar strategy should be developed for the remaining Voivodeships in Poland due to its multidimensionality, including strong social activation, knowledge transfer and the development of organic farming.

## References

- [1] Dahme, H.-J. Wohlfahrt, N. (2001). Einleitung. Kommunale Sozialpolitik – neue Herausforderungen, neue Konzepte, neue Verfahren. In Dahme,

- H.-J./Wohlfahrt, N. (eds). *Handbuch kommunale Sozialpolitik*. Wiesbaden: Verlag für Sozialwissenschaften, pp. 9-20.
- [2] EUROPA 2020. (2018). *Strategia na rzecz inteligentnego i zrównoważonego rozwoju sprzyjającego włączeniu społecznemu* [online]. [cit. 2018-02-20]. Available at: [http://ec.europa.eu/eu2020/pdf/1\\_PL\\_ACT\\_part1\\_v1.pdf](http://ec.europa.eu/eu2020/pdf/1_PL_ACT_part1_v1.pdf).
- [3] Europejski Fundusz Rolny na rzecz Rozwoju Obszarów Wiejskich (EFRROW) (2018). [online]. [cit. 2018-02-20]. Available at: [https://ec.europa.eu/agriculture/rural-development-2014-2020\\_pl](https://ec.europa.eu/agriculture/rural-development-2014-2020_pl).
- [4] Fojtíková, L. Vahalík, B. a Staničková, M. (2016). Economic Integration Impact On The EU Trade Structure, *Actual Problems Of Economics*. National Academy Of Management, 182(8), pp. 41-50.
- [5] Kaňa, R. a Mynarzová, M. (2012). Interoperability between EU Countries in the Security Area. In *International Conference on European Integration 2012*. Proceedings of the 1st International Conference on European Integration 2012. Ostrava: VŠB-TU Ostrava, pp. 105-116.
- [6] Krawczyk-Sokołowska, I. Mesjasz-Lech, A. Nowicka-Skowron, M. (2017). Rynek pracy a systemy wczesnego ostrzegania w zarządzaniu zasobami ludzkimi. In Jędralska, K. Dyduch, W. (eds.). *Nauki o zarządzaniu. Dokonania, trendy, wyzwania*. Katowice: Wydawnictwo Uniwersytetu Ekonomicznego, pp. 236-246.
- [7] Lokalna Strategia Rozwoju (2018). [online]. [cit. 2018-02-20]. Available at: <http://www.minrol.gov.pl/content/download/54990/302765/version/1/file/Procedury%20odwo%C5%82awcze.pdf>.
- [8] Melecký, L. and Staničková, M. (2014). Regional Efficiency Evaluation by DEA Approach: Comparison of Selected EU15 and EU13 Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 465–475.
- [9] Nowicka-Skowron, M., Krawczyk-Sokołowska I., Mesjasz-Lech A. (2017). Strategie innowacji w warunkach konkurencyjności. In Sopińska, A. Wachowiak, P. (eds.), *Wyzwania współczesnego zarządzania strategicznego*. Warszawa: Oficyna Wydawnicza Szkoła Główna Handlowa w Warszawie, pp. 257-273.
- [10] Okręglička, M. Mynarzová, M. a Kaňa, R. (2015). Business Process Maturity In Small and Medium Sized Enterprises. *Polish Journal Of Management Studies*. Volume 12, Issue 1, pp. 121-13.
- [11] Porter, M.E. (1991). Toward a Dynamic of Strategy. *Strategic Management Journal*, vol. 12, Special Issue: Fundamental Research Issues in Strategy and Economics, pp.95-117.
- [12] Program Rozwoju Obszarów Wiejskich na lata 2014-2020. (2018). [online]. [cit. 2018-02-20]. Available at: [http://prow.slaskie.pl/dokument/prow\\_2014\\_2020](http://prow.slaskie.pl/dokument/prow_2014_2020).
- [13] Romanowska, M. (2015). Innowacyjne przedsiębiorstwo w nieinnowacyjnej gospodarce. *Przegląd Organizacji* Nr. 8/2015, pp.4-8.
- [14] Skowron-Grabowska, B. Nowakowska-Grunt, J. (2017). Innovative Projects in Enterprises. *Zeszyty Naukowe Politechniki Śląskiej. Organizacja i Zarządzanie* z.109, pp. 97-111.

## **Rural Entrepreneurial Management and European Union Support on the Example of Częstochowa County**

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### **Abstract**

*One of the most visible indicators of entrepreneurship of farmers in Poland, due to the support from the State and the European Union, is currently the use of available economic resources and the necessity to improve agricultural holdings. Many features providing the quintessence of entrepreneurial management in rural regions cause the sphere has become an identified field of scientific research. The aim of the paper is the recognition of the significance of rural entrepreneurial management in the context of European Union support on the example of the selected local territorial unit, i.e. Częstochowa County in southern Poland. The author has aimed at presenting entrepreneurial management and European Union support as the determinants of development of rural areas. The applied research method was the survey carried out on a sample of 135 farmers of the selected county.*

**Keywords:** *European Union, entrepreneurial management, management, rural entrepreneurship*

**JEL Classification:** *F50, Q13, R10*

### **1. Introduction**

Entrepreneurship is an economic and social occurrence the advance of which is noticeable all over the world. Also in Poland, the growth in the area of entrepreneurship occurred in the nineties of the XX century in reference to the succession of economic liberalization assumptions. The transformation in the economic principles of the country contributed to the entrepreneurship perception as one of the major elements determining structural, economic and social shifts occurring at once (Stachowicz et al., 2014).

The aim of the paper is the recognition of rural entrepreneurial management in the context of European Union support on the example of the selected local territorial unit, i.e. Częstochowa County. The author has aimed at presenting entrepreneurial management and European Union support as the determinants of development of rural areas.

The selected research area, Częstochowa County, is the county located in southern Poland, in the Silesian Voivodeship. It covers an area of approximately 1519 km<sup>2</sup>, and the population is nearly 135.5 thousand people. It is based in the city of Częstochowa, which is located outside its territory. It consists of two urban and rural municipalities: Blachownia and Koniecpol and 14 rural ones.

## 2. Rural Entrepreneurial Management and its Specificity

Entrepreneurial management is an inconclusive and comprehensive term, as a result there are numerous interpretations of this idea. It is multidisciplinary in its framework, and this is the crucial motive for Wiklund (et al., 2011) to highlight that entrepreneurial management scholars have yet to accomplish a universal definition of the concept (Bojar and Mieszajkina, 2014; Gierszewska and Romanowska, 2016). Counting on the objectives on the research realized, a variety of descriptions are used by the theorists and professionals (Jędralska and Dyduch, 2017; Lichtarski, 2015). In literature, many interpretations of entrepreneurial management correspond with the indications of the process aimed at opportunities and probabilities (Castano et al.; 2015, Faggio and Silva, 2014; Gregorczyk et al., 2010; Kościelniak, 2013; Williams and Nadin, 2010). Explanations and interpretations of entrepreneurial management frequently involve such elements as: novelty, creativeness, adaptability and readiness to compromise (Bratnicki, 2002; Ochojski et al., 2006). For that reason, the basis of entrepreneurial management is to look for, explore and use the chances for a new advantage (profits, growth in value) through a exceptional consolidation of different means (Barczyk, 2004; Prusak et al., 2012). Drucker (2006) characterizes entrepreneurial management as the aptitude to form something original and diverse. Correspondingly in Darmadji (2016) perspective the entrepreneurial management is capability in inventive thinking and creative performance as essential, assets, propulsion, objectives, strategy and instructions in the life's challenges. Also Suryana (2006) points out that entrepreneurial management include all objectives, and activities connected with achieving the opportunities and establishing of business (Kadłubek, 2016).

Rural areas are defined differently, therefore one may come across various interpretations of this concept. In Poland, rural areas include an area of the country outside administrative borders of cities, i.e. built-up areas, agricultural areas (arable lands, meadows, pastures and orchards), forests, waters (including inland waters), wasteland (Wyszkowska, 2006). Typically rural spatial arrangements (Kiausiene and Vazoniune, 2016) perform the function stimulating local economic development by means of the activities typical of them in the field of agriculture, agro-food industry, tourism, recreation and forestry. In the conditions of Poland, countryside is still identified with agriculture since the basic determinant of its economy is agricultural production.

The phenomenon of rural entrepreneurial management is the result of taking an initiative by rural population in search of "niche" suitable for their own predispositions. Entrepreneurial management in the country is characterized by the variety of the form and number of rural businesses, which are mainly small and medium companies, whose activity is becoming increasingly important in the development of many rural areas of the country (Adamowicz, 2004). The basic component of entrepreneurial management in rural areas is therefore small business.

One of the most visible indicators of entrepreneurial management of farmers in Poland, on the grounds of the support from the State and the European Union, is currently the use of available economic resources and the need to improve agricultural holdings (Barcik and Barcik, 2006) .

Rural entrepreneurial management basically does not differ much from the essence of generally understood entrepreneurial management. The differences between entrepreneurial management in urban areas and rural areas are mainly due to the mentality of the rural community, which is characterized by low susceptibility to changes, unwillingness to take risk and lack of ability to adapt to changes occurring in the socio-economic system. The specificity of the rural environment brings about that the conditions of conducting business in this area are tougher than in the city. However, business in the country has its advantages

(among others, cheaper labor and lower cost of land), which determine that many entrepreneurs become interested in rural areas.

Many features providing the quintessence of entrepreneurial occurrence cause entrepreneurial management in broad-spectrum, but also entrepreneurial management in rural regions has become an identified field of scientific research. The perspective of further deliberation within this area causes there has been chosen the description integrating these two occurrences, which describes entrepreneurial management as an activity intended at looking for innovative solutions, developing emerging conveniences, instigating modifications in activities and also creating source of profits.

### **3. Description of the Course of the Survey**

The survey was carried out in spring 2017. The work on the preparation of the research began with the development of the survey. The summary of the components of the research was made on 29 May - 3 June. On the last day of the research there were ordered the collected data and presented in the form referring to the methodological assumptions.

The spatial scope of the research included the area of some of Częstochowa County, i.e. two types of municipalities: two urban and rural municipalities (Blachownia and Konięcpol) and four rural municipalities (Mykanów, Kłomnice, Poczesna and Konopiska).

The empirical inquiry presented in the subsequent part of the paper is realized on the basement of primary data since the major source of the data presented is the questionnaires amounting to 135 items addressed to the farmers of the county. The survey was conducted through direct personal contact with the respondents. The questionnaires were handed in only to those who expressed the will to take part in the research. Only 35 of 170 questionnaires were not returned.

### **4. Analysis of the Survey Results**

The survey involved 135 villagers from the area of Częstochowa County. In each of the municipalities, there were tested respectively 0.5% people of working age population (18-64), being the owners or co-owners of agricultural holdings.

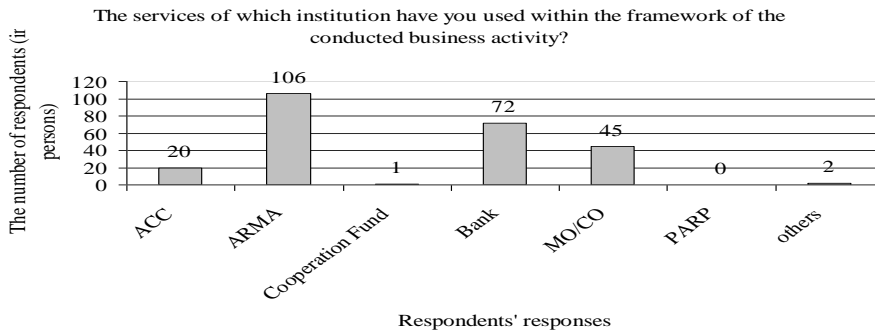
When summarizing the results of the analysis of the survey demographics, in the study population, there were mostly the residents of two largest municipalities in the county: Blachownia and Konięcpol. The most numerous group was people aged 35-44. The respondents generally had basic vocational education. The majority of the farm representatives was the ones of the farms of 3-10ha. Among the respondents there were mostly men.

Entrepreneurship of farmers is proved, among others, by whether and to what extent they benefit from the possibility of institutional support. The data concerning this issue are included in Figure 1.

Among the most frequently indicated responses there were: the Agency for Restructuring and Modernization of Agriculture (ARMA), Bank and Municipal Office (MO) and County Office (CO). The institutions were indicated respectively by: 78.5%, 53.3% and 33.3% of all the respondents. The advice of Agricultural Counselling Center (ACC) was requested by only 14.8% of the respondents, i.e. on average every sixth resident of Częstochowa County who agreed to take part in the survey. While detailing, the following number of agricultural holdings applied for support of this institution: one of under 1ha, four of 1-2ha, 13 of 3-10ha and 12 of over 10ha. Only one person dealt with Cooperation Fund, appointed to handle funds from the EU and other international institutions. None of those questioned ever used the

opportunities provided by Polish Agency for Enterprise Development (PARP). After the analysis of the respondents' responses concerning this issue, it can be concluded that the larger the agricultural holding the more frequently its owners used the services of the listed institutions.

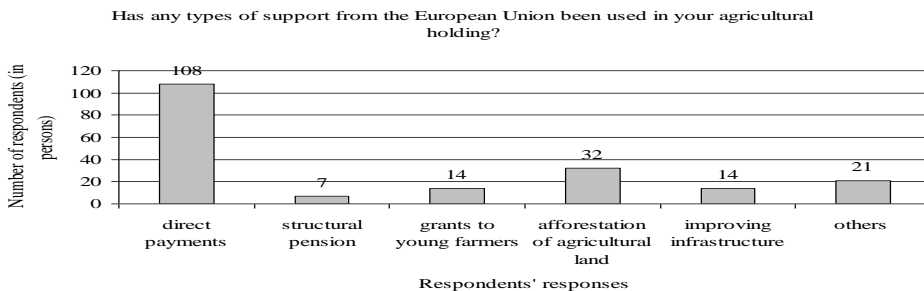
**Figure 1: Popularity of Business Environment Institutions in the Country**



Source: Own elaboration (2017)

The cooperation with the organizations mentioned above was very often associated with the type of EU funds used in the specific farm. Therefore, the farmers were also asked to express their opinion on what specific forms of EU support they benefited from. In that question, the respondents could indicate any number of responses. After calculating the amount of the indicated responses in each of the municipalities and comparing them with the number of the population taking part in the research, the analyzed units were ordered by the scale of EU support used. In terms of municipalities, the residents of Konięcpol benefited from EU funds the most and the most frequently. Due to the fact that an entrepreneurial farmer is a person that is able to exploit an opportunity to gain funds, the respondents of this municipality can be found the most entrepreneurial land owners. Further positions were subsequently occupied by the areas of: Mykanów, Blachownia, Kłomnice, Poczesna and Konopiska. In Figure 2, there is presented the information on the number of agricultural holdings supported by specific forms of aid from the EU.

**Figure 2: Types of Financial Aid from the European Union and its Use**



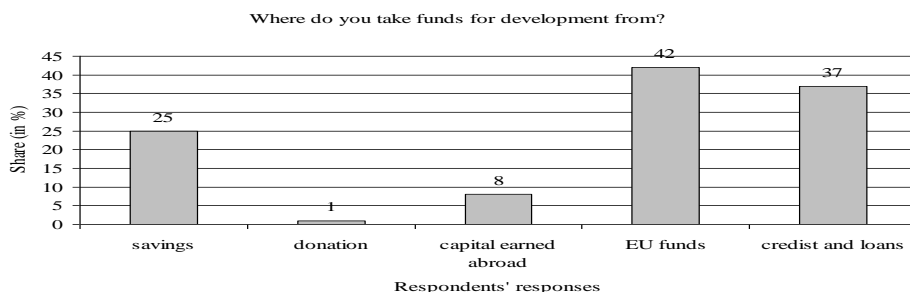
Source: Own elaboration (2017)

Exactly 80.0% of the respondents were the beneficiaries of area payments. Only payments are taken by about 43% of the farmers. Among the most often indicated options, the second position was taken by premium for afforestation of agricultural land (32 people – 23.7%). On

average, every fourth respondent exploited the opportunities of funding forest plantations. In the tested sample, not more than 14.0% of the respondents are supported only by grants and premium. In total, 20.8% of all the agricultural holdings were those that made attempts to obtain grants to young farmers and funds to improve infrastructure associated with agriculture. A little over 5.0% of the farmers switched to structural pension (21 people). In turn, 15.6% of the respondents added their answer to the item of “others, what type ...?”. Among those people two wrote: “adaptation of farms to EU standards” and “reimbursement of fuel costs”. The other 19 respondents stated that they did not use a single form of EU support. The greatest involvement in acquiring European Union support was characteristic of the members of peasant families representing medium and large farms.

Subsequently, the people who declared that they were investing in their farms or were going to invest (53.3% of the respondents) were asked to express their opinion on the sources of funds to carry out the accomplished or planned investments. The results of the research in this field are presented in Figure 3.

**Figure 3: Sources of Funds for Development of Agricultural Holdings**



Source: Own elaboration (2017)

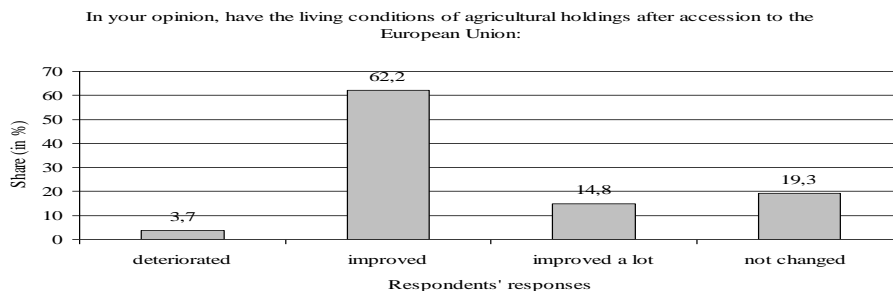
In the analyzed group of rural households, the most frequently used source of funding development activities were: EU funds, credits and loans, long-term savings, capital earned abroad and donation from a family or friends. After Poland's accession to the European Union, the situation in agriculture began to change. Before 2004, in order to finance their ventures, farmers mainly use credits and loans. As the research has shown, at present this source is also important but no longer the most significant one. According to the respondents EU funds occupy the first position nowadays. 37.2% of the responses indicated exactly this option of financing. It was the most frequently indicated by both the people who had already managed to make some investment expenditure and the ones who were just planning to invest. EU funds were the main source of funding investments in the largest farms. Credit and loans mentioned above amounted to 32.7% of the identified sources. 22.1% of the farmers funded investments with their own funds whereas 7.1% amounts to expenditure covered with funds earned abroad. Those two options dominated among the owners of agricultural holdings of 3-10ha. Only one person benefited from the funds donated by the family or friends.

The European Union has provided farmers with a lot of opportunities. Unfortunately, as the results indicate, only some of them are able to exploit them (37.2%). Relatively low absorption of EU funds is another argument determining low assessment of the level of entrepreneurship of farmers.



At this point, it is worth referring to the farmers' opinion on the changes which took place in their living conditions after Poland's accession to the European Union (Figure 4).

**Figure 4: Farmers' Opinion on the Living Conditions in the Country after Accession to the European Union**



Source: Own elaboration (2017)

Against this background, it seems optimistic that the membership of the European Union is assessed as beneficial by 77.0% of the respondents due to an improvement (greater or less) in the social situation of rural families. The survey declarations indicate that 62.2% of the farmers, i.e. on average every second person, express an opinion that the living conditions in rural agricultural holdings "have improved". Significant improvement has occurred in the opinion of 14.8% of the residents of the examined municipalities. In 26 farms, significant changes in this field have not been observed. As the data indicate, only few respondents (3.7%) are not satisfied with the results of the membership of the structures of the European Union. Five people confirmed that the realities of broadly understood existence in the country have deteriorated. The data mentioned, in combination with individual categories of size of farms, inform that along with an increase in the area used for agriculture there was also an increase in the share of the farmers positively assessing the transformations associated with the membership (from 54.5% in the smallest farms to as much as 75.9% in the largest ones). Common Agricultural Policy, which has the largest impact on the situation of Polish agriculture, is most favored by young people (74.2% of them are under 34). The largest distance in diagnosing changes could be noticeable in reactions of people aged 45-54. Just over half of them noticed an improvement. In this age group, 7.5% assessed the present living conditions as worse than those dating back more than 6 years. Disapproval was particularly found among people from families with agricultural holdings of 1-2 ha.

As it can be seen, the farmers in Częstochowa County are not unanimous, however, as the research has proved, they mostly agree that Poland's accession resulted in an improvement in the situation of agricultural holdings.

## 5. Conclusion

The considerations taken in the paper have been an attempt to draw attention to the phenomenon of rural entrepreneurial management. The presented results of the survey have been aimed at presenting the significance of rural entrepreneurial management in the context of European Union support on the example of the selected local territorial unit, i.e. Częstochowa County.

The vast majority of the survey population was men. The most numerous group was people aged 35-44. The vast majority was the representatives of agricultural holdings of 3-10ha. The main source of income for the farmers was work on the farm and wage labor.

An agricultural activity for the majority of the respondents was not profitable. Poland's accession to the European Union, in the opinion of the farmers, has improved the living conditions of farms. From among the wide range of opportunities offered by the EU, the farmers of the analyzed area most frequently benefited from direct payments and premiums for afforestation. EU funds were the main source of financing investments in agricultural holdings. Nearly half of the farmers invested in their farms. However, it is important that they expressed the intention to modernize their farms. In their opinion, agriculture should be the main direction of economic development of the county.

The entrepreneurs from the rural areas of Częstochowa County, from the point of view of the activity in undertaking ventures, were found not a very entrepreneurial group. It must be acknowledged that they could not effectively benefit from European Union support. It can be stated that these are not own companies but agricultural holdings increasingly modern due to EU funds that are the greatest manifestation of entrepreneurship among farmers. In this situation, it should be indicated that farmers cannot effectively benefit from European Union support. The level of the use of services of other institutions supporting entrepreneurial management is also still unsatisfactory.

The conclusions from the conducted research can probably refer to most rural areas in Poland. An innovative entrepreneurial way of thinking and procedure of the inhabitants of rural areas is an excellent occasion not only for the implementation of the postulations of multi-functional growth of rural regions but also the formation of the foundation for dynamic and sustainable development in rural regions. Recognition of the significance of the occurrence of entrepreneurship can turn into an encouragement for the improvement of entrepreneurial performance. The conducted analysis can be a starting point for further research in the field specified in the subject of the paper.

## References

- [1] Adamowicz, M. (2004). Wielofunkcyjność rolnictwa jako podstawa przewartościowań w polityce rolnej. *Wies i Rolnictwo*, vol. 4, p. 25.
- [2] Barcik, A. and Barcik, R. (2006). *Rozwój lokalny i regionalny po wejściu Polski do Unii Europejskiej, Tom 2*. Bielsko-Biała: Wyd. ATH w Bielsku-Białej.
- [3] Barczyk, Z. (2004). *Przedsiębiorczość i samorządność lokalna: materiały pomocnicze do wykładów*. Chorzów: Oficyna Wydawnicza Górnośląskiej Wyższej Szkoły Przedsiębiorczości im. Karola Goduli w Chorzowie.
- [4] Bojar, E. and Mieszajkina, E. (2014). *Przedsiębiorczość i wiedza w kreowaniu rozwoju regionalnego*. Lublin: Wyd. Politechniki Lubelskiej.
- [5] Bratnicki, M. (2002). *Przedsiębiorczość i przedsiębiorcy współczesnych organizacji*. Katowice: Wyd. AE Katowice.
- [6] Castano, M.S., Mendez, M.T. and Galliano, M.A. (2015). The effect of social, cultural and economic factors on entrepreneurship. *Journal of Business Research*, vol. 68/2, pp. 1496-1500.

- [7] Darmadji (2016). Entrepreneurship as New Approach to Support National Agriculture Development Program to Go Self Sufficient Ford. *Agriculture and Agricultural Science Procedia*, vol. 9, pp. 72-82.
- [8] Drucker, P.F. (2006). *Innovation and Entrepreneurship: Practice and Principles*. London: Routledge.
- [9] Faggio, G. and Silva, O. (2014). Self-employment and entrepreneurship in urban and rural labour markets. *Journal of Urban Economics*, vol. 84, pp. 67-85.
- [10] Gierszewska, G. and Romanowska, M. (2016). *Analiza strategiczna przedsiębiorstwa*. Warszawa: Polskie Wydawnictwo Ekonomiczne.
- [11] Gregorczyk, S., Romanowska, M., Sopińska, A. and Wachowiak P. (2010). *Przedsiębiorczość bez tajemnic*. Warszawa: Wyd. Szkolne i Pedagogiczne.
- [12] Jędralska, K. and Dyduch, W. (2017). *Nauki o zarządzaniu. Dokonania, trendy, wyzwania*. Katowice: Wyd. Uniwersytetu Ekonomicznego w Katowicach.
- [13] Kadłubek, M. (2016). Barriers to Development of Entrepreneurship in Management of Selected Rural Areas in Poland. *World Scientific News*, vol. 57, pp. 237-246.
- [14] Kiausiene, I., Vaznoniene, G. (2016). Development of rural social infrastructure services promoting elderly integration to society. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 434-442.
- [15] Kościelniak, H. (2013). *Przedsiębiorczość. Szanse i wyzwania*. Częstochowa: Wyd. Wydziału Zarządzania Politechniki Częstochowskiej.
- [16] Lichtarski, J. (2015). *Praktyczny wymiar nauk o zarządzaniu*. Warszawa: PWE.
- [17] Ochojski, A., Szczupak, B. and Zieliński, T. (2006). Regionalne środowisko przedsiębiorczości. Problematyka badawcza. In Klasik, A. (ed.). *Przedsiębiorczość i konkurencyjność a rozwój regionalny*. Katowice: Wyd. Akademii Ekonomicznej im. Karola Adameckiego w Katowicach.
- [18] Prusak, R., Kardas, E. and Skuza, Z. (2012). Analiza strategiczna działalności przedsiębiorstwa przewozowego. *Logistyka*, vol. 6, pp. 236-238.
- [19] Stachowicz, J., Nowicka-Skowron, M. and Voronina, L.A. (2014). *Rozwój organizacji i regionu wyzwaniem dla ekonomii i nauk o zarządzaniu*. Toruń: Wyd. TNOiK.
- [20] Suryana (2006). *Entrepreneurship. Practical Guide: Tips and Process Towards succeeded*. Jakarta: Salemba Four.
- [21] Wiklund, J., Davidsson, P., Audretsch, D.B. and Karlsson, C. (2011). The future of entrepreneurship research. *Entrepreneurship: Theory & Practice*, vol. 35(1), pp. 1-9.
- [22] Williams, C. and Nadin, S. (2010). Entrepreneurship and the informal economy: an overview. *Journal of Developmental Entrepreneurship*, vol. 15(4), pp. 361-378.
- [23] Wyszowska, Z. (2006). *Rola kapitału ludzkiego w rozwoju obszarów wiejskich*. Bydgoszcz: Wyd. Uczelniane UTP.

## Poland's Competitiveness in Services Trade on the European Union Internal Market

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### **Abstract**

*In recent decades services play an increasingly significant role in international trade and contribute to building comparative advantage of enterprises, sectors and countries. Accession to the European Union has created opportunities to enhance the degree of internationalisation of services in the Polish economy. The aim of this study is to examine Poland's competitive position and capacity in intra-EU28 trade in services in 2008-2016. The analysis was carried out based on cost-price and productivity indicators as well as the Revealed Symmetric Comparative Advantage (RSCA) index. It disclosed that, compared to other EU members, Poland had a comparative advantage in: construction; manufacturing services; transport; maintenance and repair services as well as such high-tech KIS sub-sectors as information and computer services. Poland based its competitiveness in intra-EU28 trade in services primarily on price and cost advantages whereas in terms of labour productivity and technological measures the EU28 revealed better results.*

**Keywords:** EU internal market, international competitiveness, international trade, Poland, services

**JEL Classification:** F14, F15, F16, F41

### **1. Introduction**

Increasing role of services in economies and international trade contributes to the growing interest in research on the competitive position of particular countries in the global services market as well as regional markets. Poland joined the European Union in 2004, after only 15 years of building a market economy, with a relatively low level of competitiveness (taking into account efficiency measures). However, accession to the EU and the common market resulted in adjustment processes of Polish enterprises and stimulated competitive development of the entire economy. Due to the fact that marketization process coincided with a considerable growth in the significance of the services sector in Poland's economy - in 1990-2002 the share of services in the creation of value added increased by 27.2 pp and in employment by 16.2 pp (Białowąs, 2014, p.49) - examining and assessing Poland's competitive position in trade in services on the EU internal market seems to be an important issue. The more so because the share of intra-EU trade in services (exports plus imports) is large and amounted to about 73% for Poland, and about 57% for the EU28 in 2016 (Eurostat [online], 2018). Despite the downward trend in shares of intra-EU flows in total trade in services of Poland and the EU28, shares of intra-EU services trade in GDP of these economies are growing (Kałol, 2015, pp.76-77). For many years, the European Union was the most important player on the global market for services with increasing trade surplus and Poland (though having a small share in the EU

and world services flows) stood out with a growing surplus both in international trade in services and that with the EU28.

The aim of this study is to assess changes in Poland's competitive position in trade in services within the EU28 internal market in 2008-2016 (or earlier starting from 2004, depending on the availability of data) as well as to examine the country's competitive capacity, compared to the EU28, in order to indicate main factors that determine its export specialization and competitiveness on the internal market for services.

## 2. Problem Formulation and Methodology

Competitiveness is a relative, multidimensional and dependent on the analysed economic context concept. It can be considered from three various perspectives: microeconomic (individual company), industrial (branch) or macroeconomic (the whole economy). According to the World Trade Organization (Goode, 2003, p. 75) competitiveness means the ability of a firm, a production sector or even a country to hold its own in terms of economic efficiency against other firms, sectors or countries. As emphasised by Porter (1990, p.76), the only possible concept of international competitiveness of a country is the formation of national productivity and the main national goal to produce high and rising standard of living for its citizens. Radło (2008, p.4) defines a competitive economy as such which in the conditions of free trade and free flows of factors of production is able to grow relatively quickly and develop in the long term. In this approach, the competitiveness of the economy includes both the assessment of the resulting competitiveness (competitive position) and factor competitiveness (competitive capacity). The competitive position is reflected in the level of national income, the effectiveness of the use of production factors and the position in foreign trade. On the other hand, competitive capacity is the ability of a given economy to maintain its long-term, profitable development that results in such a structure of the economy - and consequently export structure - which corresponds to long-term changes in the structure of global demand; and in the case of developed countries also the ability to create and co-create new supply and demand structures (Bieńkowski, 1995). For Varblane (2006) competitiveness consists of the following elements: the ability to sell goods and services internationally; the ability to adjust to market changes; the ability to attract factors of production; and finally as a consequence of the previous features the ability to earn which can be measured by GDP per capita. In the context of international trade the ability to sell seems to be most important to examine. According to OECD ([online], 2014) competitiveness in international trade is a measure of country's advantage or disadvantage in selling its products in international markets. Governments sometimes try to improve competitiveness of a sector through the use of export targeting, subsidies, protection or other measures what can only be done at the expense of the remainder of the economy and leads to reduced overall competitiveness in the longer-term (Goode, 2003).

Indicators of competitiveness in international trade can measure the size or increase in market shares, export performance, price ratios, cost competitiveness, or more complex dimensions (Wyszkowska-Kuna, 2014). Some of them are supposed to measure benefits from international trade (e.g. labour and capital productivity, sector's share in country's total exports) and other market domination (export performance, market share or revealed comparative advantage) (Wyszkowska-Kuna, 2014). It is also necessary to distinguish between the different stages in the measurement of competitiveness in order to reflect the process of transferring competitive potential into competitiveness (competitive position) (Viira et. al, 2015). There are input and output measures of competitiveness. Input measures concern factors that determine competitiveness, including cost and price indicators (based on wages, unit labour costs, export

unit values) whereas output measures examine a country's performance on export markets (measured either by revealed comparative advantages or market shares and their evolution over time) as well as output performance (measured by labour and capital productivity) (Wörz, 2008). As emphasised by Radło (2008), single-factor productivity measures are used to assess the competitive position while multifactor productivity (MFP) or total factor productivity (TFP) indicators to appraise the rate of technological and organizational changes in an economy that determine the competitive capacity. Viira et. al. (2015) stress that productivity is a parameter characterising efficiency of an economy and measuring the conversion of inputs into outputs. Nevertheless, without taking into account production costs and profitability indicators, a low partial productivity does not necessarily indicate low competitiveness potential, as low production costs can compensate for low partial productivity. And vice versa, high labour productivity may reflect high efficiency resulting from the use of more advanced technologies but it may also be caused by substituting inefficient capital for labour. Therefore, the authors suggest applying TFP indicator (combining all inputs and outputs used in production) rather than partial productivity indicators to characterise competitiveness.

In this paper, the "ability to sell" aspect of competitiveness in services was mainly analysed concerning Poland's performance only on the EU internal market.

To assess Poland's competitive position in intra-EU28 trade in services the following output measures were used: market shares in exports of services (in total intra-EU28 trade in services and at sectoral level) and their changes, trade balance, the Revealed Symmetric Comparative Advantage (RSCA) indicator as well as labour productivity measures (such as gross value added per hour worked, apparent labour productivity and wage adjusted labour productivity) as well as some profitability indicators (like gross operating rate) presented by certain services sectors.

Due to the lack of data on multifactor productivity or total factor productivity for services at sectoral level, evaluation of Poland's competitive capacity was conducted to a great extent based on cost and price indexes and their changes (e.g. unit labour costs, wages and salaries or labour compensations per hour worked as well as price level indices in relation to the EU28). Other input measures used in this study included: share of personnel costs in production, personnel costs per employee, investment rate, employment in technology and knowledge-intensive sectors by persons with tertiary education as percentage of total employment and enterprises in services sectors that provided training to develop ICT skills of their personnel as percentage of all enterprises in a given sector. Especially these latest indicators let to assess a country's abilities to enhance its potential in high-tech knowledge-intensive services (KIS).

The time scope of analysis covers the years 2008-2016 for main categories of services (except for government services) and, due to the lack of previous data, 2010-2016 for high-tech KIS sub-sectors as regards measuring of export performance. The research was based on the balance of payments statistics provided by the International Trade Centre (ITC), the United Nations Conference on Trade and Development (UNCTAD) and the World Trade Organization (WTO) as well as the Organisation for Economic Co-operation and Development (OECD) in accordance with BPM6 methodology (IMF 2009; United Nations 2012).

To measure Poland's comparative advantage in intra-EU28 trade in services the Revealed Symmetric Comparative Advantage Index (RSCA) is used with the following formula:

$$RSCA_{ij} = (RCA_{ij} - 1) / (RCA_{ij} + 1) \quad (1)$$

where  $RCA_{ij}$  is the original Balassa index (1965) that can be calculated as follows:

$$RCA_{ij} = (X_{ij} / X_j) / (X_{iEU} / X_{EU}) \quad (2)$$

where  $X_{ij}$  denotes country  $j$ 's intra-EU exports of service sector  $i$ ,  $X_j$  means country  $j$ 's intra-EU exports in all services sectors,  $X_{iEU}$  represents exports of all EU28 countries in services sector  $i$  and  $X_{EU}$  stands for total intra-EU28 exports in services.

Owing to the fact that  $RCA_{ij}$  results range from zero to infinity ( $0 \leq RCA_{ij} \leq \infty$ ) - with values greater than one indicating that country  $j$  has a comparative advantage in product  $i$  and values lower than one meaning a comparative disadvantage - this measure is asymmetric. To avoid this asymmetry Dalum et al. (1998) and Laursen (2015) suggest using the  $RSCA_{ij}$  indicator which allows to attribute changes below zero the same weight as changes above zero. The  $RSCA_{ij}$  index falls between -1 and +1 ( $-1 \leq RSCA_{ij} \leq 1$ ) where value greater than zero implies that country  $j$  has a comparative advantage in service sector  $i$ . In contrast, its value below zero implies a comparative disadvantage.

Other input and output measures (not connected with export performance) were gathered or calculated based on Eurostat or OECD data and concern selected years from the period 2004-2016 according to the availability of data.

### 3. Empirical Research

#### 3.1 Significance of Services Sector and Services Trade in Economies of Poland and EU28

Services constitute the most important sector both in Poland's and the EU's economies (tab. 1). In 2004-2016 shares of services (including construction) in value added amounted to, on average, 71,6% in Poland and 78,9% in the EU28 whereas in employment they accounted for 63,5% and 77,0%, respectively. Among the largest sectors in terms of value added and employment were wholesale and retail trade, transport, accommodation and food service activities as well as non-market services. In the EU28 professional, scientific and technical activities; administrative and support service activities seem to be greater in both terms whereas real estate activities create twice as much value added as in Poland.

Trade in services has also been increasing if we express it as percentage of GDP (Kąkol, 2015), though its role is less considerable compared to trade in goods. In 2016 exports of services amounted to 10,6% of GDP in Poland and 12,4% of GDP in the EU28 (7,3% and 11,1% of GDP in imports of services, respectively). In comparison, exports of goods as percentage of GDP accounted for 41,7% in Poland and 31,5% in the EU28 (41,0% and 29,5% in imports of goods) at the same time (Eurostat [online], 2018). Lower intensity of trade in services in Poland compared to the EU28 and to trade in goods may indicate still unused potential in this field, although due to the specificity of services, this potential will never be as large as in the case of goods.

Poland stood out against the background of the European Union with relatively high shares of intra-EU28 trade in services in total services trade. However, Poland's share of intra-EU exports in the country's total services exports decreased from 75,1% in 2005, through 73,5% in 2008, to 68,9% in 2016. The similar trend occurred in the EU28, where the share of intra-EU exports in total EU28 exports in services declined from 62,4% in 2008 to 56,8% in 2016. This is undoubtedly related to the very good and still unchallenged position of the EU28 in international trade in services and the rapid growth of extra-EU exports of services.

**Table 1: Gross Value Added and Employment (Based on Hours Worked) in Poland and the EU28 by Industry Breakdowns in 2004-2016 on Average in Percentage of Total**

Sector/TIME	Gross value added		Employment	
	Poland	EU28	Poland	EU28
<b>Total - all NACE activities</b>	100.0	100	100.0	100
<b>Agriculture, forestry and fishing</b>	3.0	1.63	12.8	6.09
<b>Industry (except construction)</b>	25.4	19.47	23.7	16.93
<b>Construction</b>	8.0	5.79	8.1	7.80
<b>Market Services:</b>	48.6	54.28	37	48.27
<b>Wholesale and retail trade, transport, accommodation and food service activities</b>	25.5	18.98	23.4	25.13
<b>Information and communication</b>	4.0	4.88	2.0	2.88
<b>Financial and insurance activities</b>	4.2	5.38	2.3	2.73
<b>Real estate activities</b>	5.4	11.21	0.9	1.08
<b>Professional, scientific and technical activities; administrative and support service activities</b>	7.2	10.37	5.6	11.17
<b>Arts, entertainment and recreation; other service activities; activities of household and extra-territorial organizations and bodies</b>	2.3	3.47	2.8	5.29
<b>Non-market services (public administration, defense, education, human health and social work activities)</b>	15.1	18.82	18.4	20.92
<b>Services (except construction)</b>	63.7	73.09	55.4	69.18
<b>Services (including construction)</b>	71.6	78.88	63.5	76.98

Source: Own elaboration based on: Eurostat [online], 2018

Poland's services sectors shares in intra-EU28 exports and their changes in 2008/2010-2016 were presented in table 2 as well as trade balance in 2008 and 2016. In 2008-2016, Poland increased its share in intra-EU28 exports of services from 2,56% to 2,88%. In 2016, the highest shares - larger than the average for all services - Poland revealed in: construction; manufacturing services on physical inputs owned by others; transport; and maintenance and repair services n.i.e. (as regards categories of services at level 1 of BPM classification) as well as in: information, computer and R&D services (within high-tech KIS sectors at BPM level 2 of services classification). However, in this latter case (R&D services) such good performance was noted only for the year 2016, so it is too early to prejudge the good position of this sector in Polish exports. Corresponding shares of other services sectors were lower than Poland's average share for all services, with the lowest shares of such sectors as: charges for the use of intellectual property n.i.e.; financial services; and insurance and pension services.

In 2008/2010-2016, the largest increase in the share in intra-EU28 exports of services occurred in Poland in high-tech KIS sub-sectors (especially in audiovisual, computer and information services) and at a more aggregated level in: telecommunications, computer, and information services; personal, cultural, and recreational services; manufacturing services on physical inputs owned by others; and financial services. Insurance and pension services; transport; and other business services also stood out with a slight share in intra-EU28 exports. In four groups of services a decline in shares of intra-EU exports of services in total services exports appeared. They included: construction; maintenance and repair services n.i.e.; travel as well as charges for the use of intellectual property n.i.e.

For many years Poland has had a positive trade balance with the EU28 countries for the whole services sector. However, the situation as regards trade balance in various categories of services is very diverse. In 2016, the largest trade surplus in Poland occurred in: transport; computer services; and manufacturing services on physical inputs owned by others whereas the biggest trade deficit in: charges for the use of intellectual property n.i.e.; audiovisual and related services as well as insurance and pension services.



**Table 2: Poland's Services Sectors Shares in Intra-EU28 Exports (in Percent) and Their Percentage Change in 2008/2010-2016, and Trade Balance in Mln USD in 2008/2010 and 2016**

Sector/TIME	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016/ 2008	TB 2008	TB 2016
Manufacturing services on physical inputs owned by others	4.08	5.02	6.06	6.64	5.90	6.82	7.11	6.71	6.75	65.41	1254.3	1742.0
Maintenance and repair services n.i.e.	5.98	3.62	5.27	5.86	4.43	5.69	5.34	5.71	4.91	-17.85	492.5	306.2
Transport	3.86	4.01	3.47	4.13	4.36	4.51	4.57	4.68	5.31	37.78	2892.4	4755.6
Travel	3.04	2.64	2.79	2.57	2.75	2.55	2.58	2.61	2.56	-15.85	959.7	-219.3
Construction	9.89	9.31	7.71	10.15	10.78	10.45	7.55	7.39	7.68	-22.32	486.2	975.4
Insurance and pension services	0.86	0.61	0.77	1.22	0.74	0.71	0.45	1.06	1.23	42.08	-296.7	-320.0
Financial services	0.30	0.31	0.54	0.48	0.50	0.49	0.48	0.42	0.50	65.02	-238.6	-218.8
Charges for the use of intellectual property n.i.e.	0.44	0.22	0.40	0.41	0.39	0.49	0.37	0.34	0.40	-8.69	-1037.4	-1628.5
Telecommunications, computer, and information services	1.06	1.08	1.35	1.53	1.63	1.75	1.96	2.20	2.39	126.34	-235.6	940.8
Other business services	2.49	2.60	3.12	2.84	2.84	2.72	2.57	2.62	2.79	12.15	400.0	863.2
Personal, cultural, and recreational services	1.54	1.17	1.75	2.38	1.82	1.81	2.23	2.45	2.68	73.76	-113.7	-89.9
High-tech KIS sub-sectors:*												
Telecommunications			1.42	1.33	1.36	1.22	1.20	1.06	2.43	70.85	-52.2	-243.0
Computer services			1.29	1.51	1.64	1.82	2.08	2.40	5.72	343.69	-153.3	2076.0
Information services			2.13	3.18	3.21	3.25	3.22	3.32	7.32	243.99	-11.8	178.0
Research and development (R&D)			1.66	1.90	1.76	1.70	1.66	1.75	4.41	166.51	247.0	842.0
Audiovisual and related services			0.51	0.77	0.83	1.00	1.29	1.14	2.74	431.99	-243.2	-426.0
All services	2.56	2.42	2.59	2.66	2.70	2.71	2.67	2.72	2.88	12.63	4421.0	7106.8

Note: \* For high-tech KIS sub-sectors percentage change in 2010-2016 and trade balance for 2010 instead of 2008.

Source: Own elaboration and calculations based on: (ITC, UNCTAD, WTO [online], 2018; OECD [online], 2018a).

### ***3.2 Poland's Revealed Symmetric Comparative Advantage in Trade in Services on the EU28 Internal Market***

In this section an analysis of Poland's competitive position in the EU28 internal market as revealed by services trade flows was conducted. In table 3 values of RSCA index were presented. They were calculated for Poland versus the EU28 considering intra-EU trade flows in services for the period 2008-2016. Due to no availability of earlier data for services at BPM level 2 of classification, indexes for high-tech KIS sectors cover the years 2010-2016.

In 2004, Poland revealed a comparative advantage in intra-EU28 exports in the following main categories of services (from the highest to the lowest advantage): 1) construction; 2) maintenance and repair services n.i.e.; 3) manufacturing services on physical inputs owned by others; 4) transport; as well as 5) travel (however with low RSCA value). In 2008-2016, this comparative advantage increased in two sectors (manufacturing services and transport); declined also in two categories of services and in one case (travel) it changed into a comparative disadvantage. As a result, in 2016 Poland recorded a comparative advantage only in four main services sectors, in the following competitive order: 1) construction; 2) manufacturing services on physical inputs owned by others; 3) transport; 4) maintenance and repair services n.i.e.

**Table 3: Poland's Revealed Symmetric Comparative Advantage in Intra-EU28 Trade in Services**

Sector/TIME	2008	2009	2010	2011	2012	2013	2014	2015	2016
Manufacturing services on physical inputs owned by others	0.23	0.35	0.40	0.43	0.37	0.43	0.45	0.42	0.40
Maintenance and repair services n.i.e.	0.40	0.20	0.34	0.38	0.24	0.36	0.33	0.35	0.26
Transport	0.20	0.25	0.15	0.22	0.23	0.25	0.26	0.27	0.30
Travel	0.09	0.04	0.04	-0.02	0.01	-0.03	-0.02	-0.02	-0.06
Construction	0.59	0.59	0.50	0.58	0.60	0.59	0.48	0.46	0.45
Insurance and pension services	-0.50	-0.60	-0.54	-0.37	-0.57	-0.59	-0.71	-0.44	-0.40
Financial services	-0.79	-0.77	-0.66	-0.69	-0.69	-0.69	-0.70	-0.73	-0.70
Charges for the use of intellectual property n.i.e.	-0.71	-0.83	-0.73	-0.73	-0.75	-0.70	-0.75	-0.78	-0.76
Telecommunications, computer, and information services	-0.42	-0.38	-0.31	-0.27	-0.25	-0.21	-0.15	-0.11	-0.09
Other business services	-0.01	0.04	0.09	0.03	0.02	0.00	-0.02	-0.02	-0.02
Personal, cultural, and recreational services	-0.25	-0.35	-0.19	-0.06	-0.20	-0.20	-0.09	-0.05	-0.04
High-tech KIS sub-sectors:									
Telecommunications services			-0.29	-0.33	-0.33	-0.38	-0.38	-0.44	-0.09
Computer services			-0.33	-0.28	-0.24	-0.20	-0.12	-0.06	0.33
Information services			-0.10	0.09	0.09	0.09	0.09	0.10	0.43
Research and development (R&D)			-0.22	-0.17	-0.21	-0.23	-0.23	-0.22	0.21
Audiovisual and related services			-0.67	-0.55	-0.53	-0.46	-0.35	-0.41	-0.03

Source: As in Table 2.

In the entire period considered, Poland revealed comparative disadvantages on the EU internal market in other categories of services (at BPM level 1) with the greatest disadvantage in: 1) charges for the use of intellectual property n.i.e.; 2) financial services; and 3) insurance and pension services. While in the two latter sectors a slight improvement as regards the reduction of disadvantage appeared in 2016, in the first category of services this disadvantage even increased. In 2016, Poland had small comparative disadvantages in: other business services; personal, cultural, and recreational services; travel; telecommunications, computer, and information services. Among these sectors, disadvantages were getting smaller throughout 2008-2016 in: telecommunications, computer, and information services as well as personal, cultural, and recreational services whereas in other business services RSCA results oscillated around zero (adopting negative values only in 2008 and from 2014 onwards).

As for high-tech KIS sub-sectors (at the level 2 of BPM services classification), their competitive position generally improved in 2010-2016 as at the beginning of this period all these sub-sectors in Poland revealed comparative disadvantages in intra-EU28 exports in services whereas in 2016 only two of them. From 2011 Poland recorded a rising comparative advantage in information services (with RSCA equalling 0,43 in 2016). In two other high-tech KIS sub-sectors - computer and R&D services - the country recorded comparative advantages versus the EU28 countries only in 2016. While in the case of computer services this is understandable, because Poland has been characterized by a growing comparative advantage in this sector in international trade for a few years, it is too early to draw conclusions about positive changes in trade in R&D services, in which Poland has stood out with a comparative disadvantage for a long time.

### ***3.3 Poland's Competitive Position and Competitive Capacity in Trade in Services on the EU28 Internal Market Based on Price, Cost and Productivity Measures***

Increased competition within the single market and opening of the service market should lead, according to the law of one price, to price equalization between member states. Indeed, the

price convergence in the EU accelerated significantly from 1993 and in 2008 was the greatest in history (both for services and goods), and then prices started to rise again at more differentiated pace in member countries (Kačol, 2017). Noteworthy, the price divergence on the internal market for services is over twice as large as in the case of goods and this situation persisted for many years. A decline in prices of services is hampered by relatively lower productivity of the sector and the pursuit of employed in services to earn as much as the more productive workers in the manufacturing sector as well as specific characteristics of many types of services and the inability to transport them over long distances (Kačol, 2017). Table 4 presents a comparison of price level indices in selected member states (mainly the Central and East European countries) in relation to the EU28 in 2004-2016.

**Table 4: Services Price Level Indices in Selected Member Countries (EU28=100)**

GEO/ TIME	Total services			Selected services sectors in 2016						
	2004	2008	2016	Transport	Communication	Recreation and culture	Restaurants and hotels	Education	Hospital Services	Construction
EU15	109.4	108.3	109.7	105.9	108.6	104.8	103.8	114.1	119.7	107.2
Bulgaria	22.8	30.5	31.9	48.6	66.0	57.6	44.4	22.9	17.6	49.0
Czech R.	39.6	56.3	51.6	50.4	95.8	65.5	56.5	46.8	53.3	64.0
Germany	104.6	101.7	105.1	117.2	98.6	101.7	109.2	110.9	123.6	137.3
Estonia	44.4	58.0	60.8	62.3	67.3	83.6	81.0	55.5	49.2	75.8
Croatia	52.3	58.0	52.2	85.7	89.5	71.8	70.9	49.7	39.7	52.8
Latvia	37.3	59.5	53.8	63.6	65.8	78.2	81.1	51.7	27.1	64.7
Lithuania	33.4	46.7	44.6	60.8	59.2	67.3	65.6	39.7	28.7	65.2
Hungary	47.4	52.7	45.5	69.3	89.4	61.9	59.4	46.3	24.6	52.0
Poland	36.5	49.2	41.8	51.6	42.3	57.8	71.3	39.2	35.3	62.5
Romania	24.6	40.6	36.3	51.8	49.2	61.0	53.7	26.5	16.0	43.4
Slovenia	65.5	73.6	75.4	98.3	107.1	91.8	82.0	82.9	78.4	65.8
Slovakia	33.5	48.3	51.6	54.7	82.3	74.1	74.5	50.0	40.8	68.9

Source: Own elaboration based on: (Eurostat [online], 2018)

Due to the convergence process of the CEE countries one should expect a rise in levels of their services' prices after joining the EU with a possible decrease in relative services' price levels of more advanced EU economies at the same time. This phenomenon indeed occurred in 2004-2008. However, during the next period (2008-2016) prices of services in the EU15 and Germany increased, and in most CEE countries - including Poland - they were usually falling. For more wealthy EU countries, this could be the result of economic recovery after the crisis years, while in the CEE countries this was probably the effect of adjustment processes as a consequence of the Service Directive (adopted in 2006) entry into force in 2009 which created new opportunities for this latter group of member states to increase their activities on the EU internal market for services. The deregulation of some network sectors (such as telecommunications) has also contributed to the drop in prices of services.

Considering the situation in Poland in 2004-2016, the highest decline in prices appeared in transport and communication sectors (especially in telecommunications prices were close to the EU28 average in 2004) whereas in education services prices clearly increased. In 2016, Poland stood out against the background of other EU countries with relative price competitiveness in the following services sectors: communication (with the lowest price level in the whole EU); education services (in third place of this ranking, after Bulgaria and Romania); transport (after Bulgaria and Czech Republic) as well as recreation and culture services (after Bulgaria). However, in other sectors (construction; restaurants and hotels and hospital services) Poland also ranked quite well (from the 4th to the 6th position in the price level ranking).

In tables 5 and 6 total labour costs, wages and salaries and gross value added per hour worked in absolute values in Poland and EU28 were compared for different services sectors in 2004-2016.

**Table 5: Labour Costs per Hour Worked in Poland and the EU28 by Services Sectors in 2004 and 2016 in Euro**

Sector/TIME	Total labour costs				Wages and salaries	
	Poland		EU28		Poland	EU28
	2004	2016	2004	2016	2016	2016
Electricity, gas, steam and air conditioning supply		13.6		49.0*	10.4	36.6*
Water supply; sewerage, waste management and remediation activities		7.9		21.5	6.4	16.0
Construction	3.9	7.6	17.0	23.3	6.3	17.8
Services of the business economy:	4.8	8.5	19.1	25.8		
Wholesale and retail trade; repair of motor vehicles and motorcycles		7.0		21.9	5.8	17.1
Transportation and storage		7.5		25.9*	6.1	20.0*
Accommodation and food service activities		5.6		15.4	4.7	12.2
Information and communication		14.7		44.0*	12.4	35.4*
Financial and insurance activities		13.8		51.7*	11.6	38.7*
Professional, scientific and technical activities		11.8		35.2	9.9	27.3
Administrative and support service activities		6.2		18.9	5.2	14.9
Education; human health and social work activities; arts, entertainment and recreation; other service activities	5.3	9.1	20.3	26.6		

Note: \*Data for Germany due to no availability for the EU28.

Source: Own elaboration and calculations based on: (Eurostat [online], 2018)

In 2004, total labour costs per hour worked (in absolute terms) in services of the business economy were four times lower in Poland than in the EU28 whereas in 2016 this difference was only threefold. If we look into all particular categories of services in respect of both total labour costs and wages and salaries (in euro) this relation is similar.

**Table 6: Gross Value Added per Hour Worked in Poland and the EU28 by Services Sectors in 2004, 2008 and 2016 in Euro**

Sector/TIME	Poland			EU28		
	2004	2008	2016	2004	2008	2016
Construction	7.14	9.53	10.55	20.41	22.52	26.41
Wholesale and retail trade, transport, accommodation and food service activities	6.97	10.38	12.26	20.91	22.92	26.51
Information and communication	18.16	21.57	20.68	51.19	53.39	56.94
Financial and insurance activities	12.36	19.33	20.05	53.22	57.91	66.18
Real estate activities	37.68	63.23	61.17	302.54	318.70	367.09
Professional, scientific and technical activities; administrative and support service activities	8.83	14.23	14.90	27.59	29.10	31.31
Arts, entertainment and recreation; other service activities; activities of household and extra-territorial organizations and bodies	5.36	8.83	8.62	18.41	19.93	22.74
Non-market services (public administration, defense, education, human health and social work activities)	5.53	8.65	8.77	24.76	27.52	30.54

Source: As in Table 5

Comparing gross value added per hour worked (in absolute terms) in Poland and the EU28 gives much more differentiated picture. There was an increase in labour productivity in all services sectors in 2004-2016, both in Poland and the EU28. However, in Poland the rate of productivity growth was relatively higher in 2004-2008 compared to 2008-2016 while in the EU28 it was comparable in the two analysed periods, and for some sectors (like construction

or real estate activities) this rate was even larger in 2008-2016. The only exception in the growing trend of labour productivity occurred in Poland in information and communication services where productivity decreased in 2008-2016. In 2016, labour productivity values for certain services categories in Poland were from two to six times lower than in the EU28 with the biggest differences in the following sectors: real estate activities; non-market services as well as financial and insurance activities.

Data in table 7 illustrate annual average growth rates of unit labour costs (ULC), labour compensation per hour worked (LC) and gross value added per hour worked (GVA) by services sectors in Poland and the EU28 in 2005-2016. In the period considered ULC in Poland compared to the EU28 rose (predominantly from 1,5 to 2,5 times) faster in all services categories, except for financial and insurance activities as well as information and communication services (in the latter case a considerable decline on average in ULC growth rate in the EU28 occurred whereas in Poland an increase in ULC in this sector amounted to almost 2,5%).

**Table 7: Annual Average Growth Rates of Unit Labour Costs (ULC), Labour Compensation per Hour Worked (LC) and Gross Value Added per Hour Worked (GVA) by Services Sectors in Poland and the EU28 in 2005-2016 in Percentage**

Sector/TIME	ULC		LC		GVA	
	Poland	EU28	Poland	EU28	Poland	EU28
<b>Total economy</b>	1.66	1.09	4.29	2.04	2.58	0.94
<b>Construction</b>	4.72	2.49	5.34	2.29	1.07	-0.18
<b>Business sector services excl. real estate:</b>	2.54	0.98	4.66	1.81	2.07	0.82
<b>Wholesale retail trade accommodation food services. transportation and storage</b>	2.65	1.14	4.45	1.94	1.79	0.80
<b>Information and communication</b>	2.46	-0.81	4.62	1.45	2.02	2.27
<b>Financial and insurance activities</b>	0.71	0.95	2.95	2.04	3.23	1.07
<b>Professional, scientific and technical activities. Administrative and support service activities</b>	4.14	1.74	6.04	1.60	1.89	-0.13

Source: Own elaboration and calculations based on: (OECD [online], 2018b)

The situation was similar as regards annual average growth rates of labour compensation per hour worked by certain services sectors that were from 1,5 to almost 4 times higher in Poland than in the EU28. This difference was the biggest in the case of professional, scientific and technical activities, and administrative and support service activities while compensations in business sector services (excluding real estate) rose in Poland 2,6 times faster than in the EU28.

In 2005-2016, annual average growth rates of gross value added per hour worked by services sectors in Poland compared to the EU28 were larger in all services categories with the exception of information and communication services. The EU28 noted a negative change in GVA in the following sectors: construction as well as professional, scientific and technical activities, and administrative and support service activities.

The changes of ULC, LC and GVA for Poland are in general consistent with the assumptions of the convergence process. Nevertheless, the absolute values of these economic indicators disclose still much lower levels for Poland compared to the EU28 which means being more competitive as regards labour costs (including compensations) and less competitive as for labour productivity.

Tables 8 and 9 contain selected economic indicators reported by enterprises for different categories of services in Poland and the EU28 in 2015. Some of them characterise a country's

competitive position (such as turnover per person employed; apparent labour productivity - i.e. gross value added per person employed or gross operating rate - i.e. gross operating surplus/turnover) while others are supposed to measure economy's competitive capacity (like share of personnel costs in production; average personnel costs - i.e. personnel costs per employee; investment rate - i.e. investment/value added at factors cost). There is also a combined indicator measuring output in relation to input - wage adjusted labour productivity (apparent labour productivity by average personnel costs) - focusing on the effectiveness of the competitive process in a given sector of economy. Analysis of output measures leads to the following conclusions: 1) turnover per person employed in the EU28 was on average slightly above twice as large as in Poland in most service sectors covered in tables 8 and 9 (and almost twice as large in accommodation and food service activities); 2) apparent labour productivity in the Polish services sectors was around 2,5-3 times lower than the EU28 average (and for real estate activities over 3,5 times smaller); 3) gross operating rates in Poland were somewhat higher than in the EU28 in all services categories except for real estate activities as well as administrative and support activities.

**Table 8: Selected Enterprise Statistics for Services in Poland in 2015**

Sector/TIME	T	AC	I	R	P	AD
Turnover per person employed - thousand euro	63.0	31.7	94.7	90.2	49.2	33.5
Apparent labour productivity - thousand euro	18.6	10.5	38.6	28.2	18.1	14.7
Wage adjusted labour productivity - percentage	159.1	135.7	172.2	218.9	118.7	127.1
Share of personnel costs in production - percentage	17.1	20.6	20.1	10.8	20.3	32.9
Average personnel costs - thousand euro	11.7	7.7	22.4	12.9	15.2	11.6
Gross operating rate - percentage	14.8	15.2	23.6	20.6	19.5	14.1
Investment rate - percentage	43.1	27.7	14.6	50.6	11.4	18.6

Note: T- Transportation and storage; AC - Accommodation and food service activities; I - Information and communication; R - Real estate activities; P - Professional, scientific and technical activities; AD - Administrative and support service activities.

Source: Own elaboration based on: (Eurostat [online], 2018)

**Table 9: Selected Enterprise Statistics for Services in EU28 in 2015**

Sector/TIME	T	AC	I	R	P	AD
Turnover per person employed - thousand euro	138	52	208	185	114	71
Apparent labour productivity - thousand euro	51	23	92	103	57	36
Wage adjusted labour productivity - percentage	147	127	167	290	121	146
Share of personnel costs in production - percentage	25.3	29.7	26.3	12.1	31.8	35.0
Average personnel costs - thousand euro	35.0	17.9	54.9	35.5	46.9	24.7
Gross operating rate - percentage	14.1	14.7	20.5	42.8	19.4	18.4
Investment rate - percentage	24.6	16.0	14.3	55.3	7.6	19.1

Note: As in Table 8

Source: As in Table 8

Examination of input measures let to indicate the following relationships: 1) lower shares of personnel costs in production in Poland compared to the EU28, usually by 20-30% (besides administration where the difference did not exceed 10%); 2) 2,5-3 times larger average personnel costs in the EU28 than in Poland in all services sectors; 3) much greater investment rate in Poland in: transportation and storage; accommodation and food service activities; professional, scientific and technical activities; and only slightly bigger in information and communication whereas the EU28 invested relatively more in real estate activities and administration. Considering effectiveness of transferring inputs into outputs based on wage

adjusted labour productivity it is worth noting that Poland recorded better results in this respect in three sectors: transportation and storage; accommodation and food service activities as well as information and communication while in other services, the EU28 had an advantage.

### 3.4 Poland's Competitive Capacity to Develop Trade in High-tech KIS

Poland's potential to enhance trade in high-tech KIS can be partly assessed based on employment structure and ICT training measures. Table 10 includes data on employment in technology and knowledge-intensive sectors by persons with tertiary education in 2016. They confirm good employment structure in the Polish services sector as a whole as well as in presented certain groups of knowledge-intensive services apart from: electricity, gas, steam and air conditioning supply; water supply and construction (where the EU28 stood out with a bit better employment structure).

**Table 10: Employment in Technology and Knowledge-Intensive Sectors by Persons with Tertiary Education (Levels 5-8) in Poland and the EU28 in 2016 as Percentage of Total Employment**

Sector/TIME	Poland	EU28
<b>Total - all NACE activities</b>	33.6	33.9
<b>Services</b>	45.9	39.3
<b>Electricity, gas, steam and air conditioning supply; water supply and construction</b>	18.6	19.5
<b>Wholesale and retail trade; accommodation and food service activities; activities of households as employers</b>	25.1	19.7
<b>Total knowledge-intensive services</b>	64.5	53.8
<b>Knowledge-intensive high-technology services</b>	76.6	65.8
<b>Knowledge-intensive market services (except financial intermediation and high-technology services)</b>	59.9	58.0
<b>Other knowledge-intensive services</b>	63.6	51.4
<b>Total less knowledge-intensive services</b>	24.3	20.7

Source: As in Table 9

According to Wyszowska-Kuna who investigated HRST- core employment (i.e. persons who have a university-level degree and are working in science and technology occupations) in services sectors (including KIS) in 2004-2010 Poland enjoyed a growing advantage over the European Union (whereas in manufacturing the situation was reversed). Nevertheless, if we look at the absolute number of researchers employed in services of the business economy, it is moderate compared to the most of EU28 countries (of course, taking into account the size and population of these economies). In 2014, this number amounted to 13497 (full-time equivalent) in Poland; 81665 in France (2013); 58303 in the United Kingdom; 29345 in Germany; 25612 in Spain; 24213 in Netherlands; 8812 in Hungary; 7988 in Czech Republic; and only 14 905 in Italy (as for such a big country); 3204 in Romania; and 1051 in Slovakia (Eurostat [online], 2018). We will reach a similar conclusion if we consider participation of Polish companies offering ICT training to their employees (table 11) which is significantly smaller compared to the EU28 average in all categories of services.

**Table 11: Enterprises (10 Persons Employed or More) in Services Sectors that Provided Training to Develop/Upgrade ICT Skills of Their Personnel in Poland and the EU28 in 2017 as Percentage of Enterprises**

Sector/TIME	Poland	EU28
Construction	7	14
Wholesale and retail trade; repair of motor vehicles and motorcycles	11	21
Transportation and storage	8	16
Accommodation	10	19
Information and communication	46	59
Real estate activities	17	28
Professional, scientific and technical activities	21	34
Administrative and support service activities	13	19
ICT sector	48	63
Financial and insurance activities (2012)	50	79*
Retail trade, except of motor vehicles and motorcycles	8	16

Note: \*Data for Germany due to no availability for the EU28.

Source: As in Table 10

In 2014, business enterprise R&D expenditure in high-tech KIS sectors accounted for 891 mln euro in Poland; 14296 mln euro in the United Kingdom; 14138 mln euro in France (2013); 7061 mln euro in Germany; 3212 mln euro in Spain; 3163 mln euro in Italy; 2627 mln euro in Netherlands; 2504 mln euro in Austria (2013); 1985 mln euro in Denmark; 1133 mln euro in Finland; 688 mln euro in Czech Republic; 435 mln euro in Hungary; and barely 181 mln euro in Bulgaria; 104 mln euro in Romania; 79 mln euro in Slovakia; 73 mln euro in Croatia; and 64 mln euro Lithuania (Eurostat [online], 2018). Against this background, the expenses of enterprises on R&D in high-tech KIS sectors in Poland should be assessed rather modestly. These results are part of the overall picture of the entire Polish economy as regards R&D activities. The research conducted by Halásková et.al. (2016) based on selected R&D indicators through cluster analysis in years 2004 and 2013 indicated relatively marked differences in the position and development of scientific and research activities between the EU28 countries. Bulgaria, Lithuania, Latvia, Slovakia and Poland were recognized as countries lagging behind the other EU countries in the development of R&D, innovation and knowledge economy.

Summing up, the analysis of Poland's relative technological capabilities (besides good employment structure as regards personnel with tertiary education) in services sectors did not reveal a high potential in this field which is still rather moderate. Without considerable changes in Poland's economic policy aimed at lowering the technological gap between this country and better developed EU countries (see Mucha-Leszko, 2014; Wojtas, 2014) major changes in the competitiveness of the Polish economy, including the services sector, should not be expected. As emphasised by Dosi et.al. (2015), at the present time low factor costs cannot guarantee the success of firms on international markets, technological capabilities are of key importance.

#### 4. Conclusion

On the basis of the analysis conducted in this paper one can try to determine Poland's competitive position in trade in services within the EU28 internal market as well as main factors that affect the country's competitive or non-competitive results. Considering RSCA values for Poland and the country's shares in intra-EU28 exports in services (with their changes) it can be confirmed that in 2016 Poland revealed comparative advantages and developed export specialization mainly in: 1) construction; 2) manufacturing services on physical inputs owned by others; 3) transport; 4) maintenance and repair services n.i.e.; i.e. in



labour-intensive and to a lesser extent capital-intensive services. Among the high-tech KIS sub-sectors the best competitive positions occurred in information and computer services whereas it is too early to prejudge maintaining positive results from 2016 by R&D sector. The largest comparative disadvantages versus the EU countries have been kept for years in: charges for the use of intellectual property n.i.e.; financial services; and insurance and pension services that in Poland had a very small combined share in intra-EU28 services exports. Looking into different labour productivity measures of competitive position it should be noted that although its level in Poland has been increasing (along with the processes of economic convergence) gross value added per hour worked in absolute terms was from two to six times lower in certain services sectors than in the EU-28 in 2016, with the biggest differences in: real estate activities; non-market services as well as financial and insurance activities.

Examination of competitive capacity based on price and labour costs disclosed Poland's advantages in relation to the EU28 generally in all services sectors. As for price indices, in 2016 this predominance was the greatest in: communication (the lowest price level in the whole EU); education; transport as well as recreation and culture services. Despite rising labour costs and compensations per employee in all services sectors their absolute levels in Poland are still three times lower on average than in the EU28. However, research on Poland's potential to enhance trade in high-tech KIS based on technology and human resources measures gave an ambiguous picture. Apart from relatively good assessment of Polish employment structure compared to the EU28 as regards persons with higher education employed in knowledge-intensive sectors, the degree of ICT training for personnel in all categories of services as well as the relatively low level of R&D expenditure by enterprises in high-tech KIS do not indicate a significant potential in this area. If Poland wants to gain and maintain firm competitive advantages in trade in services in both the single market and the global market, in the long term it should primarily focus on its technological capabilities as low labor costs will not ensure a lasting competitive advantage forever, especially in conditions of economic convergence and growing level of GDP per capita. Therefore, further research is needed, contingent on the availability of sectoral data, incorporating such efficiency indicators as total factor productivity or multifactor productivity as well as a more detailed analysis of factors affecting labour productivity level.

## References

- [1] Balassa, B. (1965). Trade Liberalization and "Revealed" Comparative Advantage. *The Manchester School of Economic and Social Studies*, vol. 33, iss. 2, pp. 99-123.
- [2] Białowąż, T. (2014). Zmiany strukturalne w gospodarce. In Mucha-Leszko, B. (ed.). *Pozycja gospodarcza Polski w Unii Europejskiej*. Lublin: Wyd. UMCS, pp. 45-78.
- [3] Bieńkowski, W. (1995). *Reaganomika i jej wpływ na konkurencyjność gospodarki amerykańskiej*. Warszawa: PWN.
- [4] Dalum, B., Laursen, K. and Villumsen, G. (1998). Structural change in OECD export specialization patterns: de-specialization and "stickiness". *International Review of Applied Economics*, vol. 12, iss. 3, pp. 423-44.
- [5] Dosi, G., Grazzi, M. & Moschella, D. (2015). Technology and costs in international competitiveness: From countries and sectors to firms. *Research Policy*, vol. 44, iss. 10, pp. 1795-1814.
- [6] Eurostat (2018). *Database* [online]. [cit.2018-03-01]. Available at: <http://ec.europa.eu/eurostat/data/database>.
- [7] Goode, W. (2003). *Dictionary of Trade Policy Terms. Fourth Edition*. Cambridge: Cambridge University Press.

- [8] Halásková, M., Slovák, S. and Halásková, R. (2016). Impact of Selected R&D Indicators on Competitiveness of the European Union Countries. In *The 3rd International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 309-318.
- [9] International Monetary Fund (2009). *Balance of Payments and International Investment Position Manual. Sixth Edition (BPM6)*. Washington, D.C.: IMF.
- [10] ITC, UNCTAD, WTO (2018). *Trade in services database: Trade Map - International Trade Statistics* [online]. [cit.2018-02-27]. Available at: <https://www.trademap.org>.
- [11] Kąkol, M. (2015). Stopień zintegrowania wewnętrznego rynku usług UE. *Annales UMCS. Sectio H, Oeconomia*, vol. 49, iss. 2, pp. 73-89.
- [12] Kąkol, M. (2017). Building the genuine single market for services. In Santagostino, A. (ed.). *The Single European Market and Trade Policy*. Cambridge: Cambridge Scholars Publishing, pp. 55-99.
- [13] Laursen, K. (2015). Revealed Comparative Advantage and the Alternatives as Measures of International Specialization. *Eurasian Business Review*, vol. 5, iss. 1, pp. 99-115. DOI: 10.1007/s40821-015-0017-1.
- [14] Mucha-Leszko, B. (2014). Wzrost gospodarczy i proces konwergencji oraz średnio i długoterminowe perspektywy zmniejszenia luki rozwojowej. In: Mucha-Leszko, B. (ed.). *Pozycja gospodarcza Polski w Unii Europejskiej*. Lublin: Wyd. UMCS, pp. 15-44.
- [15] OECD (2014). *Glossary of Statistical Terms* [online]. [cit.2018-03-07]. Available at: <https://stats.oecd.org/glossary/detail.asp?ID=399>.
- [16] OECD (2018a). *"Trade in services - EBOPS 2010"*. *OECD Statistics on International Trade in Services Database* [online]. [cit.2018-03-07]. Available at: <http://stats.oecd.org>.
- [17] OECD (2018b). *Productivity Statistics* [online]. [cit.2018-03-07]. Available at: <http://stats.oecd.org>.
- [18] Porter, M. (1990). *The Competitive Advantage of Nations*. New York: Free Press.
- [19] Radło, J.M. (2008). Międzynarodowa konkurencyjność gospodarki. Uwagi na temat definicji, czynników i miar. *Prace i Materiały*, no. 284. Warszawa: IGŚ SGH.
- [20] United Nations (2012). *Manual on Statistics of International Trade in services 2010*. New York: UN.
- [21] Varblane, U. (2006). Does the broadening of EU detain its competitiveness in the world market? In Vahtra, P. and Pelto, E. (eds.). *The Future Competitiveness of the EU and its Eastern Neighbours: Proceedings of the Conference*. Turku: Turku University Press, pp. 27-47.
- [22] Viira, A-H., et. al. (2015). Competitiveness of the Estonian Dairy Sector, 1994-2014. *Journal of Agricultural Science*, vol. 26, no. 2, pp. 49-112.
- [23] Wojtas, M. (2014). Innowacyjność gospodarki. In: Mucha-Leszko, B. (ed.). *Pozycja gospodarcza Polski w Unii Europejskiej*. Lublin: Wyd. UMCS, pp. 123-149.
- [24] Wörz, J. (2008). Austria's Competitiveness in Trade in Services. *FIW Research Report*, no. 003.
- [25] Wyszowska-Kuna, J. (2014). Competitiveness in International Trade in Knowledge-Intensive Services - The Case of Poland. *Comparative Economic Research*, vol. 17, no. 2, pp. 79-100.

## Key Aspects of the Progressive Development of the CSDP Leading to the Creation of a Common European Defense

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### **Abstract**

*The growing power of the European Union after establishment of the Common Foreign and Security Policy (CFSP) and, in particular, after the formation of a Common Security and Defence Policy (CSDP) as a major part of CFSP has led to the EU's gradual creation of defence and crisis management structures and capabilities. The Lisbon Treaty brought the necessary impetus to this area. In 2010, the European External Action Service, based just on the Lisbon Treaty, has enabled far better and more effective coordination of the main processes. The aim of this article is, by the use of mainly qualitative research, to analyze key initiatives, events and the roles of the bodies and institutions of the European Union within the framework of relevant development steps of the Common Security and Defence Policy in order to characterize and identify their importance in the future development of the European defence.*

**Keywords:** *Common Security and Defence Policy, crisis management, EU missions and operations, European External Action Service European Union*

**JEL Classification:** *F15, F51, F52, F53*

### **1. Introduction**

After the key political changes (in the early 1990s), only the United States appeared to meet the criteria of being a world superpower. Although fast downfall of the bipolar power division of the world significantly decreased the probability of a global military conflict, is not possible to consider the present security situation as free of safety threats (Kaňa and Mynarzová, 2016). Especially regional conflicts stand out from the common understanding and command of armed conflict and bring relatively new situations described as asymmetric and, more recently, the hybrid warfare (Kofman, Migacheva, et al., 2017).

Common Foreign and Security Policy is a very specific and original area due to the national sovereignty of EU Member States, which remains under state control (Kabus, 2017). CFSP is formulated in the Treaty of Lisbon (Treaty on European Union-TEU, Article 21). CFSP covers a whole range of EU security issues, which are also set out in a number of other documents. It should be noted that, unlike foreign policy (diplomatic activities), emphasis is placed on the security aspect. An integral part of the CFSP is the Common Security and Defence Policy, which provides operational capacity through EU civilian and military resources (Kaňa and Mynarzová, 2014b; Weiss, 2014).

Development in the field of CSDP has been rising in recent years. The activities of the European Council, the European External Action Service and the Commission's initiatives show a common interest in improving cooperation in this area and to continue in the coming

years in the gradual building of a common European defense. The article will not only focus on the characteristics of key events, but will also analyze important legislative initiatives, including the roles of individual EU institutions.

## 2. The Most Important Steps in Forming the CSDP

The origins of the present European Union's security and defence architecture can be traced back to the years following World War II, but real the foundation of the Common Foreign and Security Policy has been introduced in the Maastricht Treaty. With its entry into force on 1<sup>st</sup> November 1993, it created a single institutional framework, the European Union, based on three pillars - the second of which was the Common Foreign and Security Policy. The second pillar was (as well as the third pillar) built strictly at intergovernmental level. *The European Commission and the European Parliament thus could not took decisions in this area, but there is important role of the Commission as an initiator and proposer for "way forward"*. The European Council was designated as a Coordinator for the CFSP (taking strategic principles and guidelines) together with the Presidency country. The main actor in the framework of CFSP was the Council, where common approaches and actions were adopted, for its approval it was necessary to reach unanimity (The Lisbon Treaty [online], 2008).

While the European Union recognized ambitious objectives in the field of external security and defence through the Maastricht Treaty, it would not be until the late 1990s, after conflict in the former Yugoslavia, including Kosovo War, 1998-1999 and a policy change in the United Kingdom, that a specific steps were introduced for an independent Common European Security and Defence Policy equipped with substantial crisis management capabilities.

Bilateral meeting between France and the UK held in Saint-Malo (December 1998), a key acceleration aspect leading to the creation of European Security and Defence Policy. Following the Saint-Malo Declaration, numerous European Council summit meetings defined the military and civilian capabilities needed to fulfil the *Petersberg tasks* (defined in the Petersberg Declaration of the former Western European Union in 1992 – see below). Examples include especially the Cologne European Council Meeting (1999), where the concept of a European Security and Defence Policy was first officially used, and the Helsinki European Council Meeting (1999), which contributed to the ESDP assembling the list of resources needed to implement the tasks identified, which was defined as the *European Headline Goal* (EHG) 2003. It was about a planned military capabilities of the European Union by 2003. The list of military ESDP capabilities - the Force Catalogue - was revised several times thereafter. In 2000, the European Council in Santa Maria de Feira, in addition to more precise relationship between ESDP and NATO, has also discussed the function of new institutions of ESDP, which were finally established at the end of 2000 at the Nice summit. It was the *Political and Security Committee, the Military Committee and the Military Staff* (see chapter 3). At its meeting in Laeken (2001), the European Council agreed on the operational side of ESDP in the context of crisis management. ESDP was formally recognized as a combat-ready finally. (Kaňa and Mynarzová 2012, 2014a).

In 2003, ESDP became operational through the first ESDP missions and operations. Since 2003, the EU has initiated over thirty five crisis-management missions and operations. In addition, the EU presented its first ever *European Security Strategy* in December 2003, outlining key threats and challenges facing Europe – *terrorism, proliferation of weapons of mass destruction, regional conflicts, state failure and organised crime*. This strategy was revised in 2008 so as to respond to new security challenges and remained in place until the presentation of a follow-on *EU Global Strategy* in the summer of 2016. In May 2004, the *Headline Goal 2010*, has been approved which included the concept of *EU Battlegroups* (EU

Battle Groups Concept). These comprehensive security military units have to give the EU the ability to quickly intervene mainly in lower intensity conflicts. The first units reached operational capability in January 2007 (EEAS [online], 2013).

Treaty of Lisbon (2009) renamed the European Security and Defense Policy by the new term *Common Security and Defense Policy*, the latter continue to be a part of the Common Foreign and Security Policy. The Lisbon Treaty also established the post of High Representative of the Union for Foreign Affairs and Security Policy, merging the two positions of High Representative for CFSP and Commissioner for External Relations – Vice President (HRVP). This treaty canceled the pillar structure of the EU. The original second pillar - CFSP, however, continues to maintain its specific *intergovernmental* properties. The Lisbon Treaty formally endorsed the extension of the mentioned *Petersberg tasks*, which now include (see Article 43 TEU): “joint disarmament operations, humanitarian and rescue tasks, military advice and assistance tasks, conflict prevention and peace-keeping tasks, tasks of combat forces in crisis management, including peacemaking and post-conflict stabilisation”. In addition, these tasks could contribute to the fight against terrorism, including the possibility to support other (third) states in combating terrorism in their territories (Rehrl, 2017).

Another newly established institution was the *European External Action Service*. It should help the High Representative with his coordination role. Another change that the Lisbon Treaty brought was contractual confirmation of *European Defense Agency*, EDA into primary legislation. It also introduced the so-called starter fund for the EU military operation, which complements the existing mechanism for financing of EU military operations - ATHENA. *Crisis Management and Planning Directorate* (CMPD) was established in November 2009, this led to the integration of civilian and military dimensions of strategic planning and crisis management (Staab, 2011).

On December 2013 (EUCO 217/13), for the first time since the entry into force of the Treaty of Lisbon, the European Council held a thematic debate on defence, which was preceded by a meeting with the Secretary General of the NATO. The European Council identified at this meeting priority actions for stronger cooperation in CSDP areas. In June 2015 (EUCO 22/15), The European Council tasked the High Representative with continuing the process of strategic reflection with a view to preparing an EU global strategy on foreign and security policy. In June 2016 (EUCO 26/16), the European Council welcomed the presentation of the *Global Strategy for the European Union's Foreign and Security Policy* prepared by the HRVP Federica Mogherini, and also discussed EU-NATO cooperation in the presence of the NATO Secretary General and called for further enhancement of the relationship. On November 2016, the Commission presented the *European Defence Action Plan* (EDAP), which outlined how a *European Defence Fund* (launched in July 2017 by J. C. Juncker) and other actions can support Member States' more efficient spending in joint defence capabilities, strengthen European citizens' security and foster a competitive and innovative industrial base. In December 2016 (EUCO 34/16), the European Council urged swift action for implementing the *EU Global Strategy* and the *Joint Declaration* signed in Warsaw by EU and NATO leaders on July 2016 (Rehrl, 2017).

### ***2.1 Key Initiatives Under the Present Development of the CSDP***

The new momentum was given to the development of the CSDP with the implementation of the *EU Global Strategy of 2016* (June 2016, presented by HRVP). Security and defence has become one of the priority areas for work on the implementation of the EU Global Strategy (EUGS), which also includes resilience building and an integrated approach to conflicts and crises, strengthening the connection between internal and external policies, updating existing

or preparing new regional and thematic strategies, and stepping up public diplomacy efforts. Priorities of the EU Global Strategy are as follows (Europa [online], 2018c):

1. *The Security of our Union* - NATO remains the primary framework for most member states, a more credible European defence is essential for EU internal and external security. This includes *fighting terrorism, hybrid threats, economic volatility, climate change, and energy insecurity*,
2. *State and Societal Resilience* - The EU invests in the resilience of states and societies to help them withstand and more quickly recover from conflict and crisis,
3. *An Integrated Approach to Conflicts and Crises* - The EU engages in a practical and principled way in peacebuilding. Human security is at the core of all EU actions and priority is early to prevent conflict and save precious human lives. EU stays engaged in the aftermath of conflict to ensure that peace is deeply rooted in society,
4. *Cooperative Regional Orders* - Regional governance should make easier to manage security concerns, reap economic gains, and project influence. This is the rationale for the EU's own peace and development. Working with regional organizations around the world is necessary,
5. *Global Governance for the 21st Century* - The EU believes in the force of law rather than the law of force and support human rights, sustainable development, and access to global commons for everybody. A strong UN is the core of the multilateral order and a cross cutting priority for all EU policies is a strong focus on "Human Rights, Women, Peace and Security and Gender Equality and Women's Empowerment"

From a geographical point of view, the EUGS is focusing on the *extended region* that includes Eastern Europe with its Central Asian extension, as well as the Mediterranean and Central African zones. The EU therefore has no longer the ambition of being a global actor in the structures of international order. The document determines specific scenarios and perceptions of threats, including a change in the context of European security caused by the aggression of Russian Federation against Ukraine. The strategy also articulates other threats associated with the Russian activity: disinformation activities associated with military threats and hybrid activities aimed at internal political methods of destabilizing other countries. It also refers to previous threats, such as transnational terrorism and those threats, that can increasingly and clearly destabilize individual countries – related to cyber security and energy security, organized crime or climate change (EEAS [online], 2018c; Koziej, 2017).

Another key step towards strengthening the CSDP and closer cooperation between the Member States of the EU, which should aim at the gradual creation of the European Defense Union (*J. C. Juncker made the case for creating a fully-fledged European Defence Union (EDU) by 2025* – see European Commission [online], 2018b) was establishment of the *European Defence Fund (EDF)* in June 2017, which should accelerate the integration processes in the scope of spending used especially for armament purchases. The EDF has two strands – "Research", fully funded from the EU budget, with 90 million EUR until the end of 2019, with 25 million EUR allocated for 2017, then 500 million per year after 2020. Second source is "Development and acquisition" for Member States to cooperate on joint development and the acquisition of defence equipment and technology through co-financing from the EU budget and practical support from the Commission, with 500 million EUR in total for 2019 and 2020, then 1 billion EUR per year after 2020. The programme will leverage national financing with an expected multiplying effect of 5. It could therefore generate of 5 billion per year after 2020 (European Commission [online], 2018a).

Crucial for further development and cooperation in the CSDP framework was establishment of the *Permanent Structured Cooperation (PESCO)* in December 2017 (based on Article 42 and 46 TEU). It enables close cooperation of a group of the Member States in the area of

security and defence. A fixed framework of cooperation will allow Member States, which have the will and capabilities, to jointly develop defence capabilities, invest in the same projects and increase contribution and operational readiness of their armed forces. Consequently, it would enable the development of joint formations of the land forces, naval forces or air forces (Koziej, 2018).

### 3. Indispensable Institutions Within the CSDP Framework

The *European Council* defines the general EU political direction and priorities, including the area of the CFSP and the CSDP. Due to Article 22 TEU, The European Council shall identify the strategic interests and objectives of the Union relating to the CFSP and in other areas of the external action of the Union, on the basis of the following principles, as stated in Article 21 TEU, including matters with defence implications, and shall adopt the necessary decisions (Article 26 TEU), (Europa [online], 2018d).

The *Council of the European Union (EU Council, Council)* according to the policy area to be discussed is composed of government ministers from each EU country and meets in 10 different configurations of 28 national ministers. Under the Lisbon Treaty is responsible for defining and implementing of the CFSP and CSDP based on European Council guidelines - by unanimous/consensus decision (Article 42 TEU). The Foreign Affairs Council is responsible for CSDP and chaired by the HRVP. The Council take action to implement EU foreign and security policy, including possible sanctions. The Council Secretariat is headed by the Secretary-General and is divided into seven directorates-general (A-G), Directorate-General C is responsible for Foreign Affairs, Enlargement and Civil Protection (Europa [online], 2018a).

The *Political and Security Committee (PSC)* is a preparatory body for the Council of the EU and meets at the ambassadorial level. Its main roles are monitoring the international situation and helping to define policies within the CFSP including the CSDP (Article 38 TEU). PSC prepares understandable EU response to a crisis and exercises its political control and strategic direction of civilian and military crisis management missions and operations.

The highest military body established within the Council (Council Decision 2001/79/CFSP) is the *European Union Military Committee (EUMC)*. It is composed of the Chiefs of Defence of the Member States, who are regularly represented by their permanent military representatives. The EUMC provides the PSC with information assistance and recommendations on all military matters within the EU.

The *Committee for Civilian Aspects of Crisis Management (CIVCOM)* together with the EUMC advises the PSC. This committee provides information, drafts recommendations, and gives its opinion to the PSC on civilian aspects of crisis management. It is chaired by a representative of the High Representative and is composed of Member States' delegates.

The *Politico-Military Group (PMG)* carries out preparatory work in the area of CSDP for the PSC. It covers the political aspects of EU military and civil-military issues, especially operations and missions. It prepares Council Conclusions, provides Recommendations for PSC, and has a particular responsibility regarding partnerships with third states and other organisations, including EU-NATO relations. The PMG is chaired by a representative of the High Representative and is composed of Member States' delegates (EEAS [online], 2018b).

Key element player in the CSDP is the *European External Action Service (EEAS)*. It is the European Union's diplomatic service and "foreign and defence ministry". The EEAS is headed by the High Representative for Foreign Affairs and Security, who is President of the Foreign

Affairs Council and Vice-President of the European Commission too, and carries out the EU's CFSP and CSDP. Main competences of the EEAS are primarily determined by TEU (Article 18, 27), organization and functioning matters were adopted by Council Decision 2010/427/EU. By the Article 1 EEAS Decision, the EEAS was established as a functionally autonomous body of the EU. *In general, the tasks of the EEAS include ensuring the consistency and coordination of the Union's external action and preparing policy proposals and implementing them following approval by the Council. The EEAS does not propose or implement policy in its own name, but prepares acts to be adopted by the High Representative or the Council.* The EEAS is in charge of EU diplomatic missions and ensures intelligence and crisis management structures. In general, is necessary to note that the tasks of the EEAS are quite complex (Article 2 and 3 EEAS Decision), (EEAS [online], 2018a; Europa [online], 2018b).

The *European Union Military Staff (EUMS)* - working from 2001 as a Council body under the direction of the EUMC and since 2009 under the authority of the High Representative – as a Directorate-General of the EEAS. EUMS is the source of cooperative military expertise within the EEAS and commanding non-executive operations through its *Military Planning and Conduct Capability (MPCC)* operational headquarters. The EUMS coordinates the military instrument, with particular focus on operations/missions (both military and those requiring military support) and the creation of military capability. Simultaneously, the EUMS is charged with sustaining the *EU OPCEN (EU Operations Centre)* and providing its core staff when activated (EUMS [online], 2018).

The *Military Planning and Conduct Capability (MPCC)* is from June 2017 a permanent operational headquarters at the military strategic level for non-executive military missions deployed as part of the CSDP. The MPCC is part of the EU Military Staff, a department of the EEAS, and the Director General of the EUMS also serves as Director of the MPCC - exercising command and control over the operations. The MPCC is single military strategic command and control structure. *The Civilian Planning and Conduct Capability (CPCC)* is part of the EEAS as the permanent structure responsible for the autonomous operational management of civilian CSDP operations. CPCC is under the political control and strategic direction of the PSC and the overall authority of the High Representative, and is the permanent operation headquarters for all civilian EU missions (EEAS [online], 2018b).

The *Crisis Management and Planning Directorate (CMPD)* contributes to the achievement objectives of the EEAS (as its part), the CSDP and a more secure international environment through political-strategic planning of CSDP civilian missions and military operations, ensuring a coherent and effective EU-wide approach to crisis management partnership development, policies, concepts and capabilities of the CSDP (EEAS [online], 2018d).

#### 4. Conclusion

The possibility of a common defence policy is enshrined in the Lisbon Treaty's Article 42. Gradually, after the adoption of the Maastricht Treaty, the necessary structures were built, but the proverbial impetus was brought by the Treaty of Lisbon. It was not just renaming the European Security and Defense Policy by the new term Common Security and Defense Policy but establishing the post of High Representative of the Union for Foreign Affairs and Security Policy, merging the two positions of High Representative for CFSP and Commissioner for External Relations – Vice President. This made it possible for the Commission to be more involved in the initiation process in this strictly intergovernmental area. Creation of the EEAS then unambiguously contributed to better coordination and management of all processes within the CSDP.



In recent years, this has been primarily the Commission's initial efforts and the intensive work of the EEAS, which have contributed to a more vigorous development of the CSDP. The creation of a European Defence Fund, the creation of a single headquarters for operations - Military Planning and Conduct Capability, the implementation of permanent structured cooperation - PESCO and many other initiatives have taken the necessary steps towards the gradual establishment of some form of "Common European Defense". These events, in the future, likely to lead to the establishment of a European Defense Union. But one have to remember that a key player in the security area is NATO and that the CSDP itself is an intergovernmental issue where unanimous decision by all EU Member States is needed.

## References

- [1] EEAS (2013). *Common Security and Defence Policy – EU Battlegroups* [online]. [cit.2018-02-21]. Available at: [https://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/esdp/91624.pdf](https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/esdp/91624.pdf).
- [2] EEAS (2018a). *About the European External Action Service (EEAS)* [online]. [cit.2018-02-27]. Available at: [https://eeas.europa.eu/headquarters/headquarters-homepage/82/about-the-european-external-action-service-eeas\\_en](https://eeas.europa.eu/headquarters/headquarters-homepage/82/about-the-european-external-action-service-eeas_en).
- [3] EEAS (2018b). *CSDP structure, instruments, and agencies* [online]. [cit.2018-02-27]. Available at: [https://eeas.europa.eu/headquarters/headquarters-homepage/5392/csdp-structure-instruments-and-agencies\\_en](https://eeas.europa.eu/headquarters/headquarters-homepage/5392/csdp-structure-instruments-and-agencies_en).
- [4] EEAS (2018c). *Shared Vision, Common Action: A Stronger Europe. A Global Strategy for the European Union's Foreign and Security Policy* [online]. [cit.2018-02-27]. Available at: [https://eeas.europa.eu/archives/docs/top\\_stories/pdf/eugs\\_review\\_web.pdf](https://eeas.europa.eu/archives/docs/top_stories/pdf/eugs_review_web.pdf).
- [5] EEAS (2018d). *The Crisis Management and Planning Directorate* [online]. [cit.2018-02-27]. Available at: [https://eeas.europa.eu/topics/common-security-and-defence-policy-csdp/5433\\_en](https://eeas.europa.eu/topics/common-security-and-defence-policy-csdp/5433_en).
- [6] EUMS (2018). *The European Union Military Staff (EUMS)* [online]. [cit.2018-02-27]. Available at: [https://eeas.europa.eu/topics/common-security-and-defence-policy-csdp/5436\\_en](https://eeas.europa.eu/topics/common-security-and-defence-policy-csdp/5436_en).
- [7] Europa (2018a). *Council of the European Union* [online]. [cit.2018-02-21]. Available at: [https://europa.eu/european-union/about-eu/institutions-bodies/council-eu\\_en](https://europa.eu/european-union/about-eu/institutions-bodies/council-eu_en).
- [8] Europa (2018b). *European External Action Service (EEAS)* [online]. [cit.2018-02-22]. Available at: [https://europa.eu/european-union/about-eu/institutions-bodies/eeas\\_en](https://europa.eu/european-union/about-eu/institutions-bodies/eeas_en).
- [9] Europa (2018c). *Priorities of the EU Global Strategy* [online]. [cit.2018-02-21]. Available at: <http://europa.eu/globalstrategy/en/priorities-eu-global-strategy>.
- [10] Europa (2018d). *The European Council* [online]. [cit.2018-02-24]. Available at: [https://europa.eu/european-union/about-eu/institutions-bodies/european-council\\_en](https://europa.eu/european-union/about-eu/institutions-bodies/european-council_en).
- [11] European Commission (2018a). *A European Defence Fund: €5.5 billion per year to boost Europe's defence capabilities* [online]. [cit.2018-02-26]. Available at: [http://europa.eu/rapid/press-release\\_IP-17-1508\\_en.htm](http://europa.eu/rapid/press-release_IP-17-1508_en.htm).

- [12] European Commission (2018b). *European Commission welcomes first operational steps towards a European Defence Union* [online]. [cit.2018-02-26]. Available at: [http://europa.eu/rapid/press-release\\_IP-17-5205\\_en.htm](http://europa.eu/rapid/press-release_IP-17-5205_en.htm).
- [13] Kabus, J. (2017). Development of Entrepreneurship with Support of Local Self-Governments, on the Example of Belchatow County. *Zeszyty Naukowe Politechniki Częstochowskiej*. T.1. Nr. 27, pp. 162-171.
- [14] Kaňa, R. and Mynarzová, M. (2016). Common Security and Defence Policy of European Union in Light of Contemporary Security Threats. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 425-433.
- [15] Kaňa, R. and Mynarzová, M. (2014a). European Union Common Security and Defence Policy as an Important Factor of Transatlantic Security Cooperation. In *Sborník příspěvků XII. mezinárodní vědecké konference Hospodářská politika v členských zemích Evropské unie*. Ostravice: OPF SLU Karviná, pp. 350-359.
- [16] Kaňa, R. and Mynarzová, M. (2014b). European Union's Contribution to Global Security. In *Proceedings of the 2nd International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 310-318.
- [17] Kaňa, R. and Mynarzová, M. (2012). Interoperability between EU Countries in the Security Area. In *International Conference on European Integration. Proceedings of the 1st International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 105-116.
- [18] Kofman, M., Migacheva, K., Nichiporuk, B., Radin, A., Tkacheva, O. and Oberholtzer, J. (2017). *Lessons from Russia's Operations in Crimea and Eastern Ukraine* [online]. [cit.2018-02-04]. Available at: [https://www.rand.org/pubs/research\\_reports/RR1498.html](https://www.rand.org/pubs/research_reports/RR1498.html).
- [19] Koziej, S. (2018). Analiza: Polityka Bezpieczeństwa i Obrony Unii Europejskiej: od Strategii Globalnej do PESCO. *Pulaski Policy Paper Nr 1, 2018* [online]. [cit.2018-02-27]. Available at: <https://pulaski.pl/polityka-bezpieczenstwa-obrony-unii-europejskiej-strategii-globalnej-pesco/>.
- [20] Koziej, S. (2017). Strategia globalna UE: szanse i dalsze wyzwania wdrożeniowe. *Pulaski Policy Papers. Komentarz Międzynarodowy Pulaskiego* [online]. [cit.2018-02-27]. Available at: [https://pulaski.pl/wp-content/uploads/2017/02/Pulaski\\_Policy\\_Papers\\_Nr\\_3\\_17.pdf](https://pulaski.pl/wp-content/uploads/2017/02/Pulaski_Policy_Papers_Nr_3_17.pdf).
- [21] Rehrl, J. (2017). *Handbook on CSDP. The Common Security and Defence Policy of the European Union*. 3rd edition. Vienna: Armed Forces Printing Centre.
- [22] Staab, A. (2011). *The European Union Explained: Institutions, Actors, Global Impact*. Bloomington: Indiana University Press.
- [23] The Lisbon Treaty. (2008). Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union. *Official Journal of the European Union*, vol. 51, 9 May 2008 [online]. [cit.2018-02-14]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:C:2008:115:TOC>.
- [24] Weiss, T. (2014). *Bezpečnostní a obranná politika* [online]. [cit.2018-02-10]. Available at: <http://www.euroskop.cz/8715/sekce/bezpecnostni-a-obranna-politika/>.

## **Implementation of European Cohesion Policy in Slovakia: Evaluation of the Operational Programme Environment**

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### **Abstract**

*The contribution deal with the evaluation of the use of EU funds in the field of environment in the closed programming period 2007-2013 in the Slovak Republic. Implementation of this programming period was completed in 2015 and concluded by the evaluation report in 2017. In the paper we focused on analyzing the direction of the financial contribution to the regions according to the individual environmental priorities in the Slovak Republic as well as in the EU. We also mentioned the implementation status of approved grants from the European Structural and Investment Funds for the program period, based on data from central information system ITMS. At the end of the paper, we draw attention to the specifics and shortcomings that occurred during the implementation of the Operational Program Environment, which need to be taught in the current 2014-2020 programming period.*

**Keywords:** cohesion policy, EU funds, Operational Program Environment, Slovakia

**JEL Classification:** O18, O22, Q58, R58

### **1. Introduction**

The current economic problems in the world and Europe are forcing to pay more and more attention to the EU Member States and regional disparities. The EU 2020 Strategy underlines the role of the structural economic policy and stated that the crisis has wiped out over the years sought economic and social progress and exposed structural weaknesses in the European economy. Sustainable regional development and cohesion problems renew after the EU expansion, foremost due to the increasing inter-regional socio-economic differences in the appreciation of both national and international levels. (Rakauskienė, O. G., Kozlovskij V., 2014). Cohesion policy has a major impact on the economy Member States, reducing economic differences and promoting environmental and social development. The investments help to deliver many other EU policy objectives. Cohesion Policy provides the necessary investment framework and strategy to meet our agreed growth goals. Through the Partnership Agreements and the operational programmes, the Member States and the regions take ownership of their strategy and commit to see it through.

The contribution provides an insight into the use of the environmental grants in order to highlight the importance of the EU funds as a tool to meet the environmental objectives of international conventions to which the Slovakia has committed itself. On the basis of the analyse of the programming period 2007-2013, we are trying to summarize the most important aspects affecting the success of the drawing of the EU funds in Slovakia. We also try to draw attention to the specifics and shortcomings that occurred during the implementation of the

Operational Program Environment, which need to be taught in the current 2014-2020 programming period.

Promoting climate change adaptation, risk prevention and management, is one out of eleven thematic objectives which EU cohesion policy funding addresses in the programming period 2014-2020. The European Climate Adaptation Platform is a web-based tool that supports cities, regions and countries in implementing the EU climate policy, through the scientific and operational instruments (Bankwatch. 2015; Thoidou, E. 2017). The environment has been a focus for support from Cohesion Policy since 1989. Along with transport, it is one of the policy areas eligible for financing from the Cohesion Fund, on the grounds that it is important to have common environmental standards across the EU for both the health of people and to protect the eco-system (European Commission [online], 2015). Support of the area of environmental protection with funds from EU in the programming period 2007-2013 in Slovakia was solved primarily through the Operational Program Environment (OP Environment). Monitoring and evaluation of the implementation of projects aimed at fulfilling the priorities of the OP Environment is possible through the monitoring of measurable indicators, which summary are described in the following table 1.

**Table 1: Indicators at the Level of Outcome and Impact**

Oper. goal	Outcome indicator	Impact indicator
1.1	Number of inhabitants connected to the newly built drinking water supply	Share of inhabitants supplied with the drinking water from the verified water supply on total number of inhabitants
1.2	Number of inhabitants connected to the newly built sewage network	Share of inhabitants connected to public sewage network on total number of inhabitants
1.3	Compliance of the monitoring of status of waters in Slovakia with the requirements of the EU Water Framework Directive	Amount of pollutants released to waters in Slovakia according to selected indicators of pollution
2.1	Reducing flood damage in the areas with flood protection measures	Reducing flood damage in Slovakia
	Share of predicted floods on total number of floods	
3.1	Reducing emissions of selected pollutants NO <sub>x</sub> , PM <sub>10</sub> , NH <sub>3</sub> , VOC, etc.	Reduction of total emission production (in %)
3.2	Reducing greenhouse gas emissions	
4.1	Share of recycled municipal waste	Share of reutilized waste on total amount of produced waste
4.2	Share of materially utilized waste	
	Share of energetic utilized waste	
4.3	Share of modified hazardous waste	
4.4	Share of remediated sites on total number of sites with the registered environmental load	Share of area with the remediated environmental load and landfills with the zero load on total registered area with environmental load and landfills
4.5	Share of closed and cultivated landfills on total number of landfills registered until January 1, 2017	

Source: Ministry of Environment [online], 2014

Targets according to Climate change and energy (by Strategy Europa 2020) are aimed to decrease greenhouse gas emissions 20% lower than 1990 levels, increase the use of the energy

to 20% of the energy coming from the renewables and 20% increase in energy efficiency. Goals that the individual EU Member States set to achieve the objectives of the Europe 2020 strategy is probably considerably differentiated. Slovakia set its national targets in the National Reform Program 2010. In the current 2014-2020 programming period in Slovakia, the reduction of greenhouse gas emissions (excluding ETS) by 13% by 2020 (compared to the base year 2005) is mainly addressed through the OP Research and Innovation, Integrated Regional OP and OP Integrated Infrastructure. Quantitative data and trend analysis indicate that emissions by 2020 will fall by about 24% by 2020 compared to base 2005 (Baláž et al., 2015). Slovakia aims to increase the use of renewables in gross final energy consumption from 6.7% in 2005 to 14% in 2020. This objective should be met and is mainly addressed through the OP Quality of the Environment with the allocation at 173.23 mil. €. The objective of reducing final energy consumption by 11% by 2020 (compared to the 2001-2005 average) is mainly addressed within the OP Research and Innovation, OP Environment and Integrated Regional OP with allocation of 986.28 mil. €. According to the monitoring, the planned savings and insulation values are filled and exceeded. The impact of structural funds and cohesion fund interventions is very important in this area. The area of the environment was in Slovakia already supported in the programming period 2004-2006, mainly through the OP Basic Infrastructure, Priority 2 Environmental Infrastructure. In this period were implemented 205 projects with the allocation of 122,283,864 € (state 28<sup>th</sup> February 2010).

The effectiveness of the interventions in the 2007-2013 programming period has been affected by several factors. While managing authorities had partial or no impact on some. This includes factors such as the tools used within the implementation system and general institutional mechanisms at national level, the readiness of applicants or the lengthy legislative process leading to the adoption of relevant legislation in a certain area (Ministry of Environment [online], 2016).

## **2. Problem Formulation and Methodology**

In the following chapters, we formulate the problem whose analysis represents the objective of the contribution. At the same time, we mention the data sources that were needed for our analysis.

### **2.1 Problem Formulation**

The implementation of cohesion policy through the use of EU funds is linked to various specifics. In our contribution, we focus on the priorities of the environment and the impact of the use of EU funds in this area as one of the priorities of the sustainable development in Slovakia. The contribution deal with the evaluation of the use of EU funds in the closed programming period 2007-2013. The implementation of this programming period was completed and there are more possibilities for complex evaluation. We focused on analyzing the direction of the financial contribution to the regions according to the individual environmental priorities in Slovakia as well as in the EU. We also mentioned the implementation status of approved grants for the program period. At the end of the research, we draw attention to the specifics and shortcomings that occurred during the implementation of the OP Environment, which need to be taught in the current 2014-2020 programming period.

## 2.2 Model and Data

We based our research on data from central information system ITMS, a tool for applying, implementing and monitoring EU funds that serves applicants involved in the preparation, administration, selection, control, analysis, monitoring and evaluation of European Structural and Investment Funds. We also used the documents of the Ministry of the Environment, as the Managing Authority of the Operational Program Environment in Slovakia, Evaluation Reports and Manuals of European Commission at EU level as well.

## 3. Problem Solution

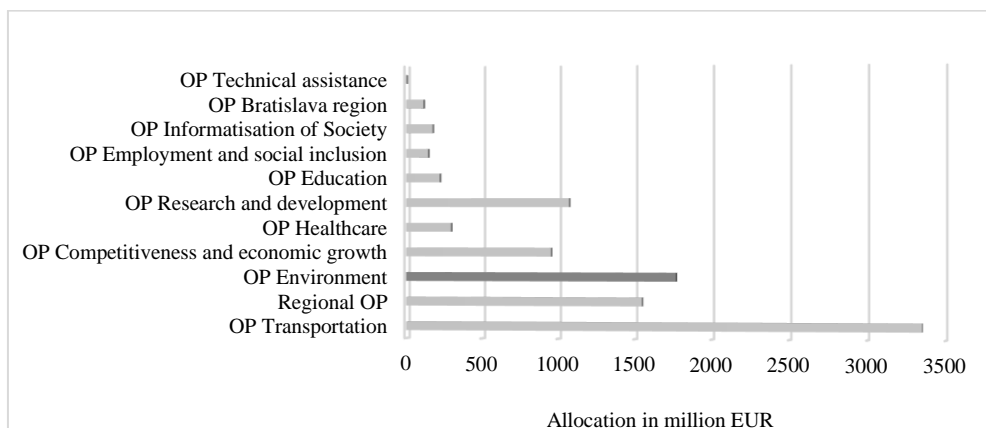
In the following chapters we describe the situation and focus on the evaluation of the use of EU funds in the field of the environment and the process factors influencing the implementation of the OP Environment in Slovakia.

### 3.1 Evaluation of the Use of EU Funds in the Field of the Environment

Operational Programme Environment was a programming document of the Slovak Republic for the utilisation of EU assistance for environmental sector defined for 2007-2013 programming period. OP Environment was financed jointly from the European Regional Development Fund (ERDF) and the Cohesion Fund (CF). OP Environment Strategy created conditions for Slovakia to converge with EU-15 in the area of the environmental infrastructure and protection. At the same time, it was significantly contributing so that economic conversion of the Slovak economy to EU-15 average is executed through the sustainable development. Global objective of OP Environment was to improve the environmental situation and ensure for the rational utilisation of resources, through the completion and improvement of the environmental infrastructure in Slovakia in the compliance with the EU and SR regulations, and to strengthen efficiency of the environmental part of the sustainable development.

Based on analyse, we can conclude the Operational Program Environment was the second most successful operational program in the 2007-2013 programming period in Slovakia, in terms of the real drawings of the allocation of the OP Environment. As is it visible in the figure 1 more funds were allocated only to the OP Transportation.

**Figure 1: Drawing of the Allocation According to Operational Programmes in Slovakia**



Source: ITMS (2016); own elaboration (2018)

In the programming period 2007-2013, OP Environment has been divided into 7 priority axes. Each priority axis of the OP was implemented in accordance with the specific strategic priorities of the National Strategic Reference Framework of the Slovak Republic for the period 2007-2013. Table 1 lists defined priority axes together with the source and amount of funding.

**Table 1: The Structure of the OP Environment According to the Priority Axes**

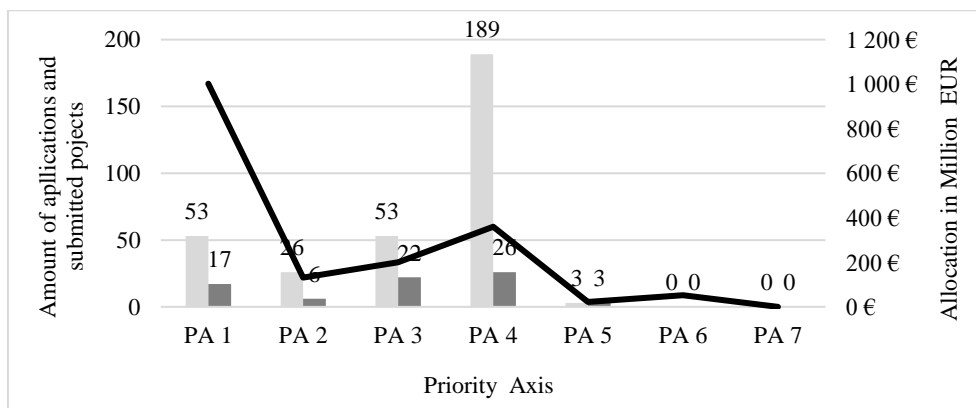
Priority Axis	Fund	EU Funds (€)	National Funds (€)	Sum (€)
PA 1: Integrated Protection and Rational Utilisation of Water	CF	944 712 965	166 714 053	1 111 427 018
PA 2: Flood Protection	CF	174 070 100	30 718 253	204 788 353
PA 3: Air Protection and Minimisation of Adverse Effects of Climate Change	ERDF	180 000 000	31 764 706	211 764 706
PA 4: Waste Management	CF	401 860 000	70 916 471	472 776 471
PA 5: Protection and Regeneration of Natural Environment and Landscape	ERDF	50 756 935	8 957 106	59 714 041
PA 6: Technical Assistance	CF	48 600 000	8 576 470	57 176 470
PA 7: Flood Warning and Forecasting System	ERDF	20 000 000	3 529 412	23 529 412
<b>Sum</b>		<b>1 820 000 000</b>	<b>321 176 471</b>	<b>2 141 176 471</b>

Source: OP Environment [online], 2017

The individual priority axes were then subdivided into the specific operational objectives, which bring together the activities aimed at achieving the defined objectives of the OP Environment. For each operational objective have been defined the groups of the eligible activities for drawing funds.

Under the OP Environment 324 applications for non-repayable financial contribution were submitted (see Figure 2). However, the success of the projects was only 23%. As Figure 2 indicate, most of the project applications 189 were noticed (light colour) under the priority of waste management, with only 26 projects submitted (dark colour) of 189 projects.

**Figure 2: An Overview of Success of Project Applications According to Priority Axes**



Source: ITMS (2016); own elaboration (2018) Legend: light colour - amount of project application; dark colour – submitted projects

For these purposes, most of the funds, namely 360 million €, have been allocated for Priority Axis 4. The exhausted subsidies also represent a contribution to meeting the waste management objectives of the Slovak Republic by 2020. They have made a significant contribution in particular to the area focused on addressing priority and financially the most demanding activities in terms of the implementation of the environmental acquis in the field of water management, flood protection, waste management, mitigating the adverse impacts of climate change and nature protection with total allocation of 1.7 billion €. The highest financial allocations were allocated to projects focusing on integrated protection and rational use of water. Of 53 projects were approved 17 projects application, with allocation of 1 billion €.

The allocated funds in the calls of OP Environment, has achieved almost 100 % of the disposable allocation towards the end of the year 2012. In terms of contracting during the first 3 years of the implementation (2008, 2009 and 2010) there had been contracting of over 54 % of the allocation. In the following five years the rate of contracting has decreased as the level of contracting was just over 42 % of the allocation of OP Environment.

The suitability of the OP Strategy is also demonstrated by the results of the implementation of the OP Environment from the point of view of the substantive progress of the implementation, j. from the point of view of meeting the objectives and results (the target values of the indicators) as well as the absorption capacity. As we can see in figure 2 the demand for applicants significantly exceeded the available allocation (the amount of the requested contribution was more than 3 times the amount of the approved contribution), which demonstrates that the objectives of the OP Environment correspond to the identified problems and the real needs of the potential applicants. It follows that from the material point of view, it is not appropriate to divert the orientation of the environmental infrastructure strategy defined in the OP Environment in the 2007-2013 programming period towards the 2014-2020 programming period. But the focus should be on further development in the light of the new legislative and conceptual starting points of the EC and the Slovak Republic and current developments in the environment sector.

### ***3.2 Assessment of the Contribution of Allocated EU Funds***

As we mentioned in the introduction, the impact of realized projects could be assessed on the basis of the predefined indicators (see Table 1). Based on analyse of ITMS data and the documents discussing the *Results of implementation, experience and lessons learned from the 2007-2013 programming period* (Operational Programme Quality of Environment [online], 2015) we can conclude that in the area of the water management, the realisation of the completion of public sewerage systems and waste water treatment (located mainly in the urban environment) has increased the population's connection to the newly constructed sewerage network. In the area of securing the population's supply with safe drinking water, after the implementation of all approved projects were connected to newly built potable water distribution by 73,045 inhabitants.

To reduce the emissions of the air pollutants and at the same time to improve the air quality, 103 projects were supported, out of which 33 projects aimed at promoting the use of the renewables and 6 projects for the greening public transport. The projects have contributed to the improvement of the level of the air monitoring and their implementation has been modernized by 27 monitoring stations of the National Monitoring Network for the Air Quality.

The funds provided through the OP Environment have contributed to the construction and modernization of the sorted municipal waste collection facilities, created conditions for the clearance of more than 110 000 t of the municipal waste. Also 46 landfills were closed and



reclaimed. Interventions directed at the waste management and the air protection have also contributed to the support of 79 small and medium-sized enterprises, which together created 52 new jobs, and the introduction of environmentally-friendly technologies.

The implementation of OP Environment has enabled the creation of an environmental burden information system, which has created a space for data collection and provision of the information on environmental burdens as a part of the public administration information system. An important contribution in the field of flood protection was the creation of the national project for the construction and operation of the Flood Warning and Forecasting System. The project is in the initial phase of implementation. Project outputs are the appropriate inputs for a comprehensive Early Warning System to be built in the 2014-2020 programming period. In the area of the climate change adaptation, support has been prioritized for the flood protection activities. The flood protection on an area of more than 160.85 km<sup>2</sup> has been provided. Also, we can conclude that with more than 500 nature and landscape conservation activities, the awareness and the environmental awareness of the public, with more than 146,000 inhabitants, was raised.

### ***3.3 The Process Factors Influencing the Implementation of the OP Environment***

Based on analyse of the implementation of OP Environment, we can conclude that a series of factors and causes have signed upon the resulting situation of the implementation of OP Environment either only once or systematically. The most problematic area was considered to be the public procurement (PP). The infringement of the rules and policies of the Act No 25/2006 Coll. of the public procurement from the side of the beneficiary has been causing high level of errors in PP made by the beneficiaries with the need of repetition, this has prolonged the implementation of the projects and as well the drawing of financial funds (Ministry of Environment, 2016). Another problem in this area is the development of the situation on the market due to the global economic crisis. Implementation of the projects was affected by the financial crisis and subsequent economic crisis in 2008/2009 (Begu, Spataru, Constantin, 2014; Ministry of Environment [online], 2016). The applicants have also had problems with the provision of co-financing of projects due to inaccessibility of funds in banking system. Except the area of PP in the projects implementation process, there had been issues with the applications from the beneficiaries' side about the alteration of the project (time management, financial plan, technical solutions), which has prolonged the realization of the projects and also the with the limitations in the payment requests submitted by the beneficiaries. This has led to the requirement of their addition, or in some cases to their cancelation. In the field of the administrative capacities in the programming period 2007 - 2013, the direct impact on the effectiveness of the implementation of the OP Environment mainly included the professional level of the administrative capacities and their fluctuation. Insufficient professional level of the administrative capacities of the Managing Authority has had a negative impact on the correct, timely and effective implementation of the OP implementation activities.

Another reason that has mainly occurred in the lower pace of draw launching was the character of the majority of the projects in the OP Environment. In regards to the investment projects, which are characterized by the time, administration and financial intensity in the development phase. This prolongs the draw launching of the projects costs. Realization of the investment projects bears the risk of unforeseen circumstances that are necessary in the alternation procedure. Among the causes, that have had the solution in the cross-sectoral nature and were not in direct competence of the MA for OP Environment, contain adopting significant legislative changes. Many of these factors may be objectively considered to be the factors that were caused beyond the procedures and processes of the MA for OP Environment. The

realization of the Action plan for the drawing acceleration and the implementation of OP Environment on the MA level has been implemented since 2012. This plan is evaluated on the two-month basis and is then sent to the Central Coordinating Body, CO, in the consciousness of the Audit Authority and also electronically sent to the EC for the reconsideration.

At the same time, however, we consider it important to create the conditions enabling potential applicants to estimate the probability of the support for their projects. Therefore, a specific call definition is important in order to reduce the number of projects not approved due to non-fulfilment of the project eligibility and completeness criteria. At the same time, it brings fewer submitted projects and their better processing, easier and faster approval of the projects due to their lower number, higher success rate and effectiveness of the challenge and savings of the applicants' funds and the Managing Authority.

#### **4. Conclusion**

The experience with the implementation of the OP Environment under the 2007-2013 programming period shows a generally well-chosen OP strategy that was focused on addressing the priority and financially most demanding activities in terms of the implementation of the environmental acquis in the field of water management, flood protection, waste management (Operational Programme Quality of Environment [online], 2015; Government of Slovakia, 2015) and protection and minimisation of adverse effects of climate change. At present (reports 31st August 2017), the implementation of the Environmental Quality Operational Program 2014-2020 at the level of approved payment applications amounts to drawing 3.3%, which represents 103,488,424.99 €, of 3,137,900,110 €. The Cohesion Fund draws 3.6% and from the ERDF at 2.78%.

The first step, conditional on the use of OP, is the announcement of calls for the applications for NFPs. The managing authority should manage the calls according to create the conditions for a sufficient use of resources, taking into account the absorption capacity of the applicants and the overall administrative capacity. This would allow for the timely fulfilment of both annual and total commitments. As was already pointed out by Jackson (2005), it is necessary to provide and use the investment grants, while at the same time ensuring the effective public administration in this area. It will be important in the future to implement the tools to strengthen absorption capacity (e.g. disseminating examples of successful projects, providing training and seminars), the secondary effect of which will be to increase applicants' awareness and, at the same time, reduce the formal or inaccuracy of the submitted projects. The Ministry of Environment of Slovakia has legal, economic and administrative tools to manage the implementation of the OP. In response to the problems, at the level of the OP with a link to the national level it is necessary in the current programming period 2014-2020 to introduce the comprehensive system tools for training, evaluation and remuneration of the administrative capacities in order to ensure the efficient management of the OP through the qualified, motivated and stabilized employees.

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## References

- [1] Baláž, V., Filčák, R., Jeck, T., Škobla, D., Polo, M. (2015). *A Pilot Project - Contribution to the EU2020 - Climate Change and Energy Sustainability: Evaluation Report 2015*. Bratislava: Office of the Government.
- [2] Begu Liviu-Stelian, Spataru Silvia, Constantin Oana. (2014). The Effect of Economic Crisis upon Convergence and Cohesion in the European Union. *Procedia Economics and Finance*, Vol. 10. pp. 150-157.
- [3] Bankwatch. (2015). *Climate's Enfants Terribles: How New Member States' Misguided Use of EU Funds Is Holding Back Europe's Clean Energy Transition*. [online]. [cit.2018-02-22]. Available at: <http://bankwatch.org/sites/default/files/enfants-terribles.pdf>
- [4] European Commission. (2015). *Ex post evaluation of the ERDF and Cohesion Fund 2007-2013* [online]. [cit.2018-02-22]. Available at: [https://www.espa.gr/elibrary/expost\\_ERDF\\_CF\\_report\\_en\\_en.pdf](https://www.espa.gr/elibrary/expost_ERDF_CF_report_en_en.pdf)
- [5] Government of Slovakia. (2015). *Program odpadového hospodárstva Slovenskej republiky na roky 2016-2020*. [online]. [cit.2018-02-25]. Available at: [https://www.minzp.sk/files/sekcia-enviroentalneho-hodnotenia-riadenia/odpady-a-obaly/registre-a-zoznamy/poh-sr-2016-2020\\_vestnik.pdf](https://www.minzp.sk/files/sekcia-enviroentalneho-hodnotenia-riadenia/odpady-a-obaly/registre-a-zoznamy/poh-sr-2016-2020_vestnik.pdf)
- [6] ITMS. (2016). Status of drawings of funds. NSSR SR, Central Coordination Body. [online] [cit. 2017-10-10] Available at: <http://www.nsr.sk/cerpanie/>.
- [7] Jackson, T. (2005). *Motivating sustainable consumption*. United Kingdom: Stirling.
- [8] Ministry of Environment. (2014). *Thematic evaluation aimed at the identifying the impact indicators of the Operational Program Environment*. [online]. [cit.2018-02-22]. Available at: [http://www.opzp.sk/wp-content/uploads/Tematick%C3%A9-hodnotenie\\_identifik%C3%A1cia-ukazovate%C4%BEEov-dopadu.pdf](http://www.opzp.sk/wp-content/uploads/Tematick%C3%A9-hodnotenie_identifik%C3%A1cia-ukazovate%C4%BEEov-dopadu.pdf)
- [9] Ministry of Environment. (2016). *Analysis of the current implementation state of the Operational the Environment program and the proposal of possible risk mitigation measures, if any commitment*. [online]. [cit.2018-02-25]. Available at: [http://www.opzp.sk/wp-content/uploads/Analyza-aktualneho-stavu-OP-ZP\\_31072015.pdf](http://www.opzp.sk/wp-content/uploads/Analyza-aktualneho-stavu-OP-ZP_31072015.pdf)
- [10] Operational Programme Quality of Environment. (2015). *Summary of Annex 1: Results of implementation, experience and lessons learned from the 2007-2013 programming period* [online]. [cit.2018-02-22]. Available at: <http://www.opkzp.sk/obsah-dokumenty/72-2/>
- [11] Rakauskienė, O. G., Kozlovskij V. (2014). Overview of EU economic cohesion process performance for new member states. *Procedia - Social and Behavioral Sciences*, 110, pp.284 – 292. Available online at: [www.sciencedirect.com](http://www.sciencedirect.com)
- [12] Thoidou, E. (2017). Climate Adaptation Planning: The context of EU Cohesion Policy and Evidence from Urban Projects in Greece. *Procedia Environmental Sciences*, Vol. 38, pp. 721-728.

## **Base Alternatives and the Paradigm of Impact Investing Development in the Coordinates of Globalization Changes and Euro Integration**

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### **Abstract**

*The paradigm of the development of impact-investing is based on the fundamental provisions of the sphere of social entrepreneurship. Social entrepreneurship is an innovative activity, initially aimed at addressing or mitigating the social problems of society on the terms of self-sufficiency and sustainability. Innovative investment instruments in the modern business environment are Impact investing, Crowd funding, Crowd sourcing, and Crowd investing. In the article the basic alternatives and forming the paradigm for the development of impact-investment in the coordinates of globalization changes and European integration are explored by authors; the application of new mechanisms of innovative development of the economy and its investment support is justified; analyzed and presented the European practice of successful impact-investment and outlined the preconditions for the development of social entrepreneurship in Ukraine. Thus, transforming investment or Impact-investing is, in fact, an investment whose main task is not to extract profit, but to achieve a certain effect of social impact.*

**Keywords:** *Black-Scholes option pricing model, capital investment, impact-investing, investment, investment sector, mechanism of innovation development, option replication strategies, put-call parity relationship*

**JEL Classification:** *M21, M29, O16, O29, C19*

### **1. Introduction**

Today, investment is a powerful basis for the development of enterprises, individual industries, sectors of the economy and the country as a whole. The ability to attract and implement investment depends on the growth or decline of production, the broad opportunities for solving social and environmental problems, the current level and the potential dynamism of physical, financial and human capital. At the present stage of development of the world economy, important and topical issues are the development of investment activity, attraction and use of foreign investments. Almost all countries of the world are focusing their efforts on increasing the investment attractiveness of foreign investment and increasing their volumes in the national economy.

A peculiar catalyst for the economic development of any country is investment. The investment process is considered as a vector of strategic development and forms the basis for successful socio-economic development of the state and its regions. The intensification of

investment processes and the effective increase of investment volumes are important factors in carrying out structural reforms in the economy and implementing an innovation-investment model of development in Ukraine. Consequently, realization of current and long-term tasks of economic and social reforms requires today not only a well-balanced and well-founded investment policy, but also the formation of effective mechanisms for the regulation of investment processes, taking into account the peculiarities of the current state of economic development of the regions.

Research of investment activity, innovation potential production, its structure and methods for evaluation, innovation investment into enterprises development was conducted in the studies by foreign and Ukrainian scientists: (Edvin J. Elton, 2014), (Frank J. Fabozzi, 2008), (Ilysheva N., 2014), (Krylova S., 2014), (Karpenko L., 2015), (Mollick E., 2014), (Lipkova L., 2013), (Mamut M., 2018), (Martin J. Gruber, 2014), (Voronzhak P., 2017) and others. Analysis of the recent scientific materials indicates the results of comprehensive research on the development and implementation of the elements of innovation and investment mechanism, improvement of the investment climate, some economic and statistic calculations. Thus, strategic planning, investment development management, elaboration of economic and financial mechanisms are examined in details. It should be noted that much attention is paid to problems of innovation investment management processes on the level of country economics and particular industries; base alternatives of impact investing development in the coordinates of globalization changes and euro integration.

## **2. Problem Formulation and Methodology**

The aim of the work consists of studying the features and rationale for applying innovative investment tools in practice in today's business environment – impact investing; the analyse of the European practice of successful impact investing and the preconditions for the development of social entrepreneurship in Ukraine.

Theoretical and methodological basis of the research is the position of modern economic concepts of management, informatization, system theory. The following methods are used for solving the tasks: scientific abstraction, generalization and comparison, classification-analytical - for the characterization and classification of the types of successful investment impact; economic-statistical and correlation analyzes - to study trends in the volume of capital construction of industrial enterprises, determination of predictive validity; generalization, systematization - for the development of managerial tools and methodological support for the process of impact-investing in the enterprise.

The information base of the study consisted of the works of domestic and foreign scientists, specialists-practitioners on the problems of research analysis.

## **3. Problem Solution**

The newest mechanisms of innovation development of the economy and its investment support are organizational and economic investment instruments, which are applicable for activating innovation and investment development of industrial enterprises. Domestic industrial enterprises are confronted more often with the problems of investing large and longer than small and short innovative investment projects aimed at bringing innovation products to the market, carrying out certain researches, and introducing innovative technologies. Alternatives for attracting funds to such projects for them is getting a loan from banks, searching for large investors, and attracting funds from venture funds. But in the Ukrainian realities, lending is

financially worst for the enterprise by way of attracting investments: interest rates are high, policies are unstable, loan conditions are large for the borrower, and in case of failure of the project, its initiator may find itself in a situation of need to pay a large debt, which is growing rapidly due to fines for delay.

Innovative investment instruments in the modern business environment are Impact Investing, Crowd Funding, Crowd Sourcing, and Crowd Investing.

The paradigm of the impact-investing development is based on the fundamental provisions of the social entrepreneurship sphere. Social entrepreneurship is an innovative activity, initially aimed at addressing or mitigating the social problems of society on the terms of self-sufficiency and sustainability. In fact, this is a business solution to the social problem that the social entrepreneur tries to solve; this is the starting point of his business. There is no problem – there is no social entrepreneur (and there is simply a business with elements of the criteria of social entrepreneurship or a social project without an entrepreneurial approach). Social entrepreneurship is a balance of social goals and a commercial component, where money is not the goal, but a means to achieve these social goals, allowing the entrepreneur to remain stable and independent of constant donor infusions.

It should also be interpreted social Entrepreneurship as a business whose purpose is to address social problems. The profits of social entrepreneurship are directed primarily at business development, community affairs, or addressing acute social problems. Social entrepreneurship is a system of management, the components of social enterprises. Social enterprises are socially oriented entrepreneurs, whose activities are aimed at achieving the welfare of territorial communities (social, environmental and ethical goals) through the use of systemic interconnection of the social entrepreneurship development and the local economies development.

The constituent components of social enterprise are social enterprises, owners or cofounders, which are non-governmental, non-profit, non-governmental organizations, such an enterprise operates under all business laws and makes a profit, and therefore it is not considered a charitable organization. It covers such areas as education, environmental protection, poverty alleviation, the protection of human rights, etc.

Criteria of social entrepreneurship are: social mission; entrepreneurial approach; innovation (innovation in solving a social problem, a new combination of resources, a new service for the region); reliability; self-sufficiency and financial sustainability.

From the point of world history view, social entrepreneurship is a very young phenomenon. Over the ocean, it exists about 30 years, in Russia and Ukraine – less than a decade. Despite such a young age, social business already today ranks among the non-profit initiatives, charity, venture philanthropy and corporate social responsibility. According to the chosen research problem it is expedient to investigate the socio-economic nature of the impact-investing process. Impact investing is a new word; it is not only in the area of social entrepreneurship: this approach is innovative for the modern market as a whole. Today's practice of impact investment can not be called widespread or very extensive, but nevertheless examples of this type of investment are currently in America, Asia, and Russia.

In June 2013, a meeting took place in London, in the title of which there is a defining phrase "impact investing" - the trend and "mantra" of the current sphere of development financing. The level of the meeting – no less than a lot – is the forum of the G8 Social Impact Investment Forum. Within the framework of the meetings, the guests of the event talked about giving this direction of investment a generally accepted structure, standardizing its tools, and also trying to provide all kinds of support. Members of the Forum decided to create a number of working

groups, besides the main driving force for the implementation of their efforts in life – the Social Impact Investment Taskforce. We suppose that the subject of impact investing is paid special attention in their publications by the European Commission, the OSCE and the World Economic Forum.

We will outline the main definitions of impact-investing, which most fully reveal its socio-economic essence:

- impact investing - the formation of new models, technologies and standards to ensure the entry of "investors from developed countries" into "new areas (previously inaccessible) of third world countries";
- impact investing - involvement of all stakeholders in the process of creating infrastructure and operating mechanisms in new zones and investment sites in order to solve social and economic problems;
- impact investing - popularization, implementation, mediation, consulting, study of tools and models for the further development of a new class of investments. Governments, international organizations and others are involved (Mamut M., 2018).

The most important thing is the concept of impact investing: the pursuit of profit is compatible with the benefits for society, solving environmental problems and social justice.

It is obvious that social impact investing is more a general concept than a specific investment strategy. The main criterion here is the desire to invest in a project that can bring tangible social benefits, in addition to economic benefits. Nevertheless, this type of investment is far from examples of pure charity and follows the classical principles of investment project management, most often implemented in developing countries.

There are historical outline of the formation and development of Impact-investing. In 2012, the Global Impact Investment Network conducted a survey among 99 investors who identified themselves as impact investors. According to the results, their total investments reached \$ 8 billion in 2012 and were planned at \$ 9 billion in 2013. More than half of the respondents stressed that they focus on average market rates of return in their investments, that is, they are far from excessive altruism. There are, however, also those who knowingly go to invest with a yield substantially below the market (Social Entrepreneurship [online], 2018).

The most important thing is the concept of impact investing: the pursuit of profit is compatible with the benefits for society, solving environmental problems and social justice.

There is comparative statistical information. According to the estimates of the Monitor Group, by 2020, global volumes of impact investing can reach a qualitatively different threshold - \$ 500 billion. Investors provide funds in various forms - purchase of a share in the capital, provision of a loan, credit lines or loan guarantees. Recently, impact investments have been contrasted with traditional "philanthropic projects" and interstate development financing programs that look less predictable and are more likely to change the subjective considerations of their main donors.

It is advisable to propose economic and mathematical recommendations for assessing the effectiveness of impact-investing in the regional aspect. Several models have been used to identify whether a stock is mispriced. Stocks that undervalued should be purchased; stocks that are overpriced should be shorted - assuming that the manager is given authority by the client to short stocks. These models fall into two general categories: dividend discount models and factorized models (Edvin J. Elton and Martin J. Gruber, 2007).

In the Table 1 we had systematized different Examples of Successful Impact Investing (Statistical yearbook of Odessa area in 2015, 2016).

**Table 1: Examples of Successful Impact Investing**

Examples of Impact Investing	Characteristics
Trade Finance Loans	An investment fund based in the UK finances small developing companies from the trade sector in Latin America and Asia. The amount of investments reached almost \$ 200 million, covering about 300 enterprises. According to the fund's estimates, over 98% of loans were returned on time. For example, part of the funds was invested in the company Fair Trade – Ecuadorian cooperative, specializing in the production of organic coffee. The cooperative numbered 300 active members-farmers, who needed to finance operating expenses and purchase new equipment.
Budget accommodation	The Brazilian private investment fund manages assets of \$ 75 million. Its investment policy focuses both on the average market rate of return and on investments in agricultural communities in South America, which make it possible to achieve tangible social returns. The Fund invested \$ 4 million in the construction of affordable housing for low-income families in agricultural areas. Within this investment project, more than 10.000 homes were built in South America, mainly in areas affected by natural disasters.
Access to "clean energy"	The € 150 million investment fund, based in Europe, makes investments of € 2-10 million in companies supplying "clean energy" to the agricultural areas of developing countries, where access to energy infrastructure is limited. For example, the fund invested € 2 million in a company supplying solar energy for lighting and cooling to Indian rural homes, schools and hospitals without access to electricity. Investment occurs through the acquisition of a stake in the capital of an Indian firm. The very same company, thanks to this investment, installed about 40 thousand systems.
Drinking water	Base of impact investing in India has been involved in microfinance for more than a decade. The base was managed to achieve a profitability level of 14% per annum, after which the second direction was opened. Within the framework of this direction, the fund provides risk capital and support to enterprises at the initial stage from the sphere of agriculture, medicine, education and renewable energy. The average size is \$ 50 thousand.
JPMorgan	JPMorgan has repeatedly stressed the importance of impact investing for its corporate mission. It chooses the course to receive investment returns in the social sphere and the sphere of environmental protection. So, by entering into an agreement with the African Agricultural Capital Fund, JPMorgan made an investment in Wilmar Flowers, a Kenyan flower exporter that purchases flowers from more than 3,000 suppliers - private Kenyan farmers. Based on JPMorgan's investments, Wilmar plans to expand the supplier base to 5,000 farmers by 2016.
Goldman Sachs	According to Alicia Glen, who is a head of the Goldman Sachs department for investing in urban infrastructure, for her company the idea of social impact investing is to increase the financing of public social services at the expense of private capital. Recently Goldman Sachs has invested in the funds of social impact of the order of \$ 10 million within the limits of one of the financing programs of New York.

Source: systematized by the authors



In this article, we focus on how to determine the fair value or theoretical price of an equity option. The model for doing so is more complicated than the model for determining the fair value of a futures contract. The performance of a stock index option position can be replicated using stock index futures. Such strategies are called *option replication strategies*, the most popular being portfolio insurance. We discuss option replication strategies, the motivation for institutional investors using such strategies, and the associated risks.

We are interesting in researching the *Put-Call Parity Relationship*. There is a relationship between the price of a call option and the price of a put option on the same underlying instrument with the same strike prices and the same expiration dates. To see this relationship, commonly referred to as the put-call parity relationship. It can be shown that the put-call parity relationship for an option where the underlying stock makes cash dividends is:

$$\begin{aligned} \text{Put option price} - \text{Call option price} &= \text{Present value of strike price} + \\ &+ \text{Present value of dividends} - \text{Price of underlying stock} \end{aligned} \quad (1)$$

This relationship is actually the put-call parity relationship for European options; it is approximately true for American options. If this relationship does not hold, arbitrage opportunities exist. That is, portfolios consisting of long and short positions in the stock and related options that provide an extra return with (practical) certainty will exist.

The next, we present *Option Pricing Models*. Theoretical boundary conditions for the price of an option also can be derived using arbitrage arguments. For example, it can be shown that the minimum price for an American call option is its intrinsic value; that is:

$$\text{Call option price} \geq \max [0, (\text{price of stock} - \text{strike price})] \quad (2)$$

This expression says that the call option price will be greater than or equal to either the difference between the price of the underlying stock and the strike price (intrinsic value) or zero, whichever is higher. The boundary conditions can be "tightened" by using arbitrage arguments coupled with certain assumptions about the cash distribution of the stock. The extreme case is an option pricing model that uses a set of assumptions to derive a single theoretical price, rather than a range. As we shall see below, deriving a theoretical option price is much more complicated than deriving a theoretical futures price because the option price depends on the expected price volatility of the underlying stock over the life of the option.

Several models have been developed to determine the theoretical value of an option. The most popular one was developed by Fischer Black and Myron Scholes in 1973 for valuing European call options. Fischer Black explains how he and Myron Scholes came up with the formula for the option pricing model.) In October 1997, Myron Scholes, along with another pioneer in option pricing theory, Robert Merton, were awarded the Alfred Nobel Prize in Economic Science for their work. Fischer Black died in 1996 and under the rules of the Nobel Committee could not be awarded this prestigious honour. However, the Nobel Committee made it dear he would have been a co-recipient.

Several modifications to the Black-Scholes model have followed since then. Another pricing model that overcomes some of the drawbacks of the Black-Scholes option pricing model is the binomial option pricing model. Basically, the idea behind the arbitrage argument in deriving these option pricing models is that if the payoff from owning a call option can be replicated by (1) purchasing the stock underlying the call option and (2) borrowing funds, then the price of the option will be (at most) the cost of creating the replicating strategy.

So, we recommend using in practise *Black-Scholes Option Pricing Model*. Arbitrage conditions provide boundaries for option prices; but to identify investment opportunities and

construct portfolios to satisfy their investment objectives, investors want an exact price for an option. By imposing certain assumptions and using arbitrage arguments, the Black-Scholes option pricing model computes the fair (or theoretical) price of a European call option on a non-dividend-paying stock with the following formula:

$$C = SN(d_1) - X e^{-rt} N(d_2) \quad (3)$$

$$\text{Where } d_1 = \frac{\ln(S/X) + (r + 0.5s^2)t}{s\sqrt{t}} \quad (4)$$

$$d_2 = d_1 - s\sqrt{t} \quad (5)$$

$\ln$  = natural logarithm

$C$  = call option price

$S$  = current stock price

$X$  = strike price

$r$  = short-term risk-free interest rate

$e = 2.718$  (natural antilog of 1)

$t$  = time remaining to the expiration date (measured as a fraction of a year)

$s$  = standard deviation of the stock price

$N(\cdot)$  = the cumulative probability density. The value for  $N(\cdot)$  is obtained from a normal distribution function that is tabulated in most statistics textbooks (Frank J. Fabozzi, CFA, 2008).

**Practical aspects of this work** are concerned with study of investment sector of enterprises in Odessa region. In this regard, statistical data concerning investment potential and enterprise activity on the market are examined below. The Table 2 presents data on dynamics of capital investment amount in Odessa during 2002-2017.

**Table 2: Capital Investment in Odessa Region in 2002-2017**

Year	The amount of capital in actual prices, mln. UAH	Chain indices dynamics		Capital investments for 1 person in the region (in actual prices, UAH)	Chain indices dynamics	
		absolute growth, mln. UAH	growth rate, %		absolute growth, mln. UAH	growth rate, %
2002	3062.0	...	...	543.2	...	...
2005	6112.0	3050.0	99.6	2149.4	1606.2	295.7
2008	14666.0	8554.0	140.0	5240.2	3090.8	143.8
2009	12772.0	-1894.0	-12.9	4183.7	-1056.5	-20.2
2010	9724.0	-3048.0	-23.9	4087.7	-96.0	-2.3
2011	9347.3	-376.7	-3.9	3931.7	-156.0	-3.8
2012	14631.0	5283.7	56.5	6145.7	2214.0	56.3
2013	11872.0	-2759.0	-18.9	4978.3	-1167.4	-19.0
2014	9361.0	-2511.0	-21.2	3924.4	-1053.9	-21.2
2015	11872.0	-2759.0	-18.9	4978.3	-1167.4	-19.0
2016	14256.2	2384.2	20.1	5993.4	1015.1	20.4
2017	20022.7	5766.5	40.4	8402.0	2408.6	40.2

Source: calculated by authors (Analytic Report of Department Statistics in the Odessa region, 2002-2017; Karpenko L., 2016).

Generally speaking, amount of direct investments is constantly increasing over the years. As a reminder, financing of innovation activity was affected mostly at the expense of enterprises (see Table 2).

The economic and statistical analysis of investment activity in the regional context acts as a practical side of the work. Total investment (equity and debt instruments) from foreign direct investors on December 31, 2017 amounted to 1.844 million USD. United States, including the level of investment in the authorized capital (equity) amounted to 1.629 million USD (Statistical yearbook of Odessa area in 2015, 2016). Consideration should also be given to *investment relations of enterprises* in Odessa region with the countries of the world.

In addition to this, calculations show that only in 2012 a real increase of the level of capital investments is observed to region economy (+56.5% according to data of Table 2) in 2009-2011 and the similar growth situation can be traced for the last 2016-2017; in 2013-2015 is observed decrease of the level of the rating in view of deflationary function. In general, unstable dynamics can be traced.

#### 4. Conclusion

Impact investing is a new concept and paradigm of the world economy, effectively operating today, supported by most developed countries of the world. In pursuit of profit, it was decided not to pay much attention to the value categories. However, life put everything in its place. When the infinite growth is impossible, and the crisis follows the crisis, it's time to reconsider the foundations that existed more than 300 years, towards helping humanity and the value ideals of social justice. No matter how pathetic this may sound, the concept works and bears fruit. Thus, transforming investment or Impact-investing is, in fact, an investment whose main task is not to extract profit, but to achieve a certain effect of social impact. That is, the business plan, which is part of the investment declaration, should clearly reflect the social goals that are planned to be achieved. Impact-investment is closely correlated with the notion of social business itself. And if social business is a business with social goals, then the obvious question arises: what do people who finance it achieve? They just want to get a small income or to support the achievement of the goals for which the social business is working. Those who proceed from the second premise are the impact-investors.

We believe that impact is an investment process with a growing horizon of time. This raises the question of whether such investments should remain a special case of traditional investment or it is necessary that impact-investment becomes a kind of global trend into which, as a particular case, ordinary commercial investments enter. That is, the process of investment is transformed through a social mission and contributes to the creation of a "social capitalism" formation. To date, impact-investment, transforming investment is quite popular in the world. In the west, this direction is rather well developed (Switzerland, Italy, Austria). In Russia and in Ukraine, this story exists rather as an assumption than a fact. We will single out the main direction of stimulating the development of the sphere of impact-investment - the formation of a standard of transforming investments that will determine the content of the social investment agreement. The norm of the standard is the primacy of the social impact objectives before the income that the investor receives.

Microfinance has a significant impact on the development of the sphere of impact-investment. The concept of "microfinance organization of an entrepreneurial type" is introduced. Financial sector regulators have the opportunity to create a system of incentives for microfinance organizations to invest part of the resources in the development of social business, social entrepreneurs.

In Ukraine, large companies are in no hurry to impact-investment, there is no toolkit, and the optimality of attracting monetary resources in the form of grants prevails. However, social entrepreneurship is the more effective solution to social problems, and in order for it to develop well, a tool like impact-investment is needed.

Social entrepreneurs prefer grants without debt. World practice shows that a business that can only live on grants is not business. And he has no long-term impact. The role of social business is growing. It is necessary to form an understanding that it is necessary to focus not on grants. Grants on the starting line have advantages; however, generate dependence on this type of support. At the end, this study provides the analytical basis of the integrated management analysis of investment activities of domestic enterprises in a competitive environment, to determine the investment potential of the industry by means of using predictive validity.

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### ***References***

- [1] Edvin, J. Elton and Martin, J. Gruber (2007). *Modern Portfolio. Theory and Investment Analysis*. – 7-th Edition. – USA: New York University. ISBN-13 978-0470-05082-8.
- [2] Frank, J. Fabozzi, CFA (2008). *Investment management*. – 2nd ed. – USA, New Jersey 07458. ISBN 0-13-889155-9.
- [3] Frankova, S. Instruments for Innovation Support and Their Classification: an Example of Instruments used in European Countries. In Kovarova, E., L.Melecky and M.Stanickova (ed). *Proceeding of the 3<sup>st</sup> International Conference on European Intergration 2016*. Ostrava: VSB-Technical University of Ostrava, 2016, pp. 649-655. ISBN 978-80-248-3911-0.
- [4] Ilysheva, N. and Krylova S. (2014). *Accounting, Analysis and Strategic Management of Innovation Activity*. Moscow: Finances & Statistics, 2014. – 216 pages. ISBN 978-5-279-03542-7.
- [5] Karpenko L.N. (2015). Multi-index models and methodological base for innovative and investment analysis of enterprises. Institutional framework for the functioning of the economy in the context of transformation: *Collection of scientific articles*. – Montreal, Canada, 2015. – pp. 287-292. ISBN 978-1-926711-20-8.
- [6] Karpenko, L.M. and Filyppova, S.V. (2016). Strategic competitive analysis of innovative enterprises development: predictive validity. *Actual problems of the economy*. – 2016. – № 6 (180). – P. 392 – 404. ISSN 1993-6788. SciVerse Scopus.

- [7] Kovarova, E. Value and Commodity Structure of the West Africa's Exports to the European Union. In Kovarova, E., L.Melecky and M.Stanickova (ed). *Proceeding of the 3<sup>st</sup> International Conference on European Intergration 2016*. Ostrava: VSB-Technical University of Ostrava, 2016, pp. 480-488. ISBN 978-80-248-3911-0.
- [8] Lipkova, L. Innovation Policy of the European Union. In Honova, I., L.Melecky and M.Stanickova (ed). *Proceeding of the 1<sup>st</sup> International Conference on European Integration 2012*. Ostrava: VSB-Technical University of Ostrava, 2012, pp. 171-178. ISBN 978-80-248-2685-1.
- [9] Mollick E. (2014): *The Dynamics of Crowdfunding: An Exploratory Study*. Journal of Business Venturing. Volume 29, Issue 1. – [online]. [cit.2018-02-28]. Available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2088298##](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2088298##).
- [10] Mamut M.V. Impact-investment as a new pattern (2018): [online]. [cit.2018-02-28]. Available at: [http://www.nb-forum.ru/social/social\\_investing/impact-investirovanie-patern.html](http://www.nb-forum.ru/social/social_investing/impact-investirovanie-patern.html).
- [11] Pearce, John A. (2013). *Strategic management: formulation, implementation and control*. – 8th ed: Publications Office of the McGraw-Hill Companies. ISBN 0-07-248846-8
- [12] Social Entrepreneurship (2018). [online]. [cit.2018-03-01]. Available at: <https://readtiger.com/www.nb-forum.ru/social/>.
- [13] Statistical yearbook of Odessa area in 2015 (2016). *State Statistics Service of Ukraine. Main Department of Statistics in Odessa Oblast*; [prep. by T.Kopilova, L.Patlachenko]. - Odessa, 2016. - 464 pages.
- [14] Navratil, B. Ever-Coser or Multi-Speed Union. In Kovarova, E., L.Melecky and M.Stanickova (ed). *Proceeding of the 3<sup>st</sup> International Conference on European Intergration 2016*. Ostrava: VSB-Technical University of Ostrava, 2016, pp. 649-655. ISBN 978-80-248-3911-0.
- [15] Voronzhak, P., Karpenko, L. and Poleshuk A. (2017). Instrumental foundation of the activation of enterprise innovative development in the financial and economic security coordinates. *World scientific extent: Collection of scientific articles*. – Agenda Publishing House, Coventry, United Kingdom, pp. 75-80. ISBN 978-0-9955865-3-6.
- [16] Voronzhak, P. and Karpenko, L. (2017). The system of analytical tools of integrated managerial analysis for the activation strategy of the enterprise innovative investment development the system. *In International Conference on Current issues of world economy and politics: International Relations 2017*. Bratislava, University of Economics in Bratislava, pp. 499-510. ISBN 978-80-225-4488-7.
- [17] Stanickova, M. Assessment of Efficiency in Selected EU Member States by Data Envelopment Analysis Models. In Honova, I., L.Melecky and M.Stanickova (ed). *Proceeding of the 1<sup>st</sup> International Conference on European Integration 2012*. Ostrava: VSB-Technical University of Ostrava, 2012, pp. 303-314. ISBN 978-80-248-2685-1.

## Multi-Criteria Analysis of Green Competitiveness of the EU Countries

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### **Abstract**

*For decades, problems related to environmental protection have been treated as a barrier to socio-economic growth. Actions for green growth and sustainable development, however, contribute to a gradual change in the perception of environmental issues. In integrating Europe, many of these elements are to be found in environmental and economic policy as part of its strategy (Europe 2020). What's more the resources and values of the environment are often considered in terms of natural capital, as a source of achieving competitive advantage at different levels. The main goal of the paper is to compare the green competitiveness of the European Union countries. Research was carried out based on the taxonomic metrics and indicators of state, pressure, and protection of the environment. Based on certain predefined criteria the environmental potential of each country was assessed for the years 2000-2016. The adopted method made it possible to evaluate the studied phenomenon as a whole, providing grounds for assigning the selected countries into four groups characterized by a similar level of green competitiveness.*

**Keywords:** competitiveness, environment, Europe 2020, green growth, sustainable development

**JEL Classification:** O44, O57, Q56

### **1. Introduction**

The importance of competitiveness of spatial units increased after intensification of economic integration processes. In the market system continuing improvement of competitiveness in all ranges and sections is an absolute necessity (Majerová and Nevima, 2016; Wojarska, 2014). According to European Commission (2010b), '*...competitiveness is a multilevel concept. At the level of the economy, competitiveness refers to the capacity of a nation or region to provide its citizens with a sustained increase in living standards with jobs available for those willing to work*'.

A significant element enhancing the productivity and at the same time competitiveness of national economies is the correct management of natural capital. Natural capital, for the purposes of this paper understood as all natural resources and values used for the needs of social and economic processes, is mentioned in many studies as a fundamental factor ensuring competitive advantage.

Correct management of natural capital is a significant element of environmental protection policy. At the age of integration processes, globalisation and increasing crises (including those concerning resources), environmental protection policy is based on the strategy of continuing and sustainable development. It assumes that the obligation to protect the natural environment

is an element of correct management and it cannot be deemed in conflict with the economic interest, whereas all activities violating such an order are considered incorrect (Jaśkiewicz, 2008).

The sustainable development strategy of the European Union, amended many times, sets the directions for a long-term vision of sustainable development combining economic development, social cohesion and environmental protection as mutually complementary elements (Commission of the European Communities, 2009). The essence of this concept is preventing or at least reducing the imbalance between economic and social development and between socio-economic development and the natural environment, which should contribute to mitigating social and environmental risks (Baumgärtner, 2008).

The significance of natural capital for socio-economic processes is equally strongly emphasized in the green growth strategy. Recently, this term has rapidly encroached on the international public debate. It should also be remembered that green growth, despite being a separate category, is not in opposition to the assumptions of sustainable development. According to the European Commission, the concept of green growth was developed in order to supplement the concept of sustainable development (European Commission, 2012). What is more, green growth is seen as an efficient tool to ensure long-term sustainable development (Kasztelan, 2017).

Both the concept of sustainable development and that of green growth indicate that competitive advantage can be built based on natural capital. This is reflected in the provisions of the EU strategy – Europe 2020 (European Commission, 2010). The new strategy and related challenges created a need for approaching the issue of competitiveness differently. Authors preparing the report for the European Commission defined the term emphasizing the necessity to change to a more dynamic path of economic growth which fosters social inclusion and is determined by environmental conditions.

Thus, competitiveness was defined as the “ability of a specific state (region, location) to deliver overproduction targets both for the present and future citizens”. The proposed definition emphasizes the equivalence of three pillars, i.e. the income pillar, that is initially based on the GDP and then shifts to a household’s available income and consumer spending; the social pillar, reflecting the country’s socio-economic ratios (including the risk of poverty, inequality); and the environmental pillar, which evaluates environmental ratios (Aiginger et al., 2013).

Thus, it can be stated that the concept of green competitiveness is inscribed within the framework of the strategy “Europe 2020” with continuous development promoting an economy that utilizes the resources more effectively, is more environment-friendly and more competitive, being one of its priorities.

The main goal of this paper is to evaluate the green competitiveness of EU countries, based on the Eurostat and OECD data and taxonomic linear ordering method enabling multidimensional comparative analysis of multi-featured objects. This type of analysis provides answers to the following questions: (1) At what stage are the individual countries placed in terms of the green competitiveness? (2) What is the overall situation of EU countries according to the studied phenomenon? (3) What are the weak points of the analyzed countries? For the purposes of implementing the main research objective, the article utilises the literature method, comparative method, and deductive reasoning. The article concludes with a summary identifying the areas for further research.

## 2. Problem Formulation and Methodology

The assessment of green competitiveness was based on the taxonomic linear ordering method (taxonomic classification) (Hellwig 1968). Taxonomic procedures are used in the study of complex phenomena that cannot be measured directly. This kind of analysis provides an estimate of the level of diversity of objects (e.g., countries) described by a set of statistical characteristics (e.g., indicators). Linear ordering is used to establish a hierarchy of individual objects based on their distance from a reference (e.g., the country for which a particular index is a reference). In a linear hierarchy the maximum degree is 1 (Łogwiniuk, 2011).

At the first stage of the study procedure, the indicators were initially selected and also constructed. The reference years 2000-2016 were chosen due to data availability on Eurostat and OECD database (OECD Environment Statistics). Diagnostic variables defining the level of green competitiveness for particular countries were adjusted in an attempt to meet two criteria: substantive and formal. Substantive indicators selection was based on literature studies (Borys, 2005; Kasztelan, 2010; 2016; Kijek and Kasztelan, 2013; Kruk, 2010), as well as on review of the databases. The next step was to check, if they meet formal criteria, i.e. whether they are measurable, complete and ensure comparability. Ultimately 26 diagnostic variables were selected for the green competitiveness analysis (table 1). The indicators were assigned to the three thematic groups: natural resources, anthropopressure and eco-behaviors. Taking into account data from the years 2000–2016 the average annual values for each indicator were calculated.

Among the selected variables, twelve were considered to be smaller-the-better (de-stimulants) reducing the synthetic measure of green growth, whereas the rest were regarded as larger-the-better (stimulants) characteristics having a positive influence on the measure. Stimulants (selected indicators) are explanatory (independent) variables whose increased values cause an increased value in the dependent variable (green growth of countries), while de-stimulants are explanatory variables whose increased values induce a decrease in the value of the dependent variable.

Since the set of independent variables (metrics) contains variables that cannot be aggregated directly using appropriate standardization, normalization formulas were applied. Among the normalization formulas, unitarization methods were selected based on the interval of a normalized variable. The zero unitarization method was used as follows (Kijek A., 2013; Kukuła, 2000):

For stimulants:

$$z_{ik}^t = \frac{x_{ik}^t - \min_t \min_i \{x_{ik}^t\}}{\max_t \max_i \{x_{ik}^t\} - \min_t \min_i \{x_{ik}^t\}} \quad (1)$$

For de-stimulants:

$$z_{ik}^t = \frac{\max_t \max_i \{x_{ik}^t\} - x_{ik}^t}{\max_t \max_i \{x_{ik}^t\} - \min_t \min_i \{x_{ik}^t\}} \quad (2)$$

where:

$z_{ik}^t$  is the normalized value of the  $k$ th characteristic in the  $i$ th object in the  $t$  period ( $t = 1, 2, \dots, T$ )

$x_{ik}^t$  is the initial value of the  $k$ th characteristic in the  $i$ th object in  $t$  period



**Table 1: Indicators of Green Competitiveness**

Indicators group	Indicator symbol	Indicator name
<b>Natural resources</b>	X <sub>1</sub>	Protected terrestrial area (% of mainland national territory)
	X <sub>2</sub>	Woodland (% of total land cover)
	X <sub>3</sub>	Water areas (% of total country area)
	X <sub>4</sub>	Renewable freshwater resources (Cubic metres per inhabitant)
	X <sub>5</sub>	Resource productivity (Euro per kilogram)
	X <sub>6</sub>	Soil erosion by water (Tonnes per hectare)
<b>Anthropopressure</b>	X <sub>7</sub>	Energy dependence by product (% of imports in total energy consumption)
	X <sub>8</sub>	Greenhouse gases emissions (Kilograms per capita)
	X <sub>9</sub>	Particulates (< 10µm) emission (in tones/km <sup>2</sup> )
	X <sub>10</sub>	Noise from neighbors or from the street (% of total population)
	X <sub>11</sub>	Domestic material consumption (Tonnes per capita)
	X <sub>12</sub>	Consumption of inorganic fertilizers (nitrogen and phosphorus) (tonnes)
	X <sub>13</sub>	Sulphur oxides (SO <sub>2</sub> equivalent) emissions (Kilograms per capita)
	X <sub>14</sub>	Total amount of waste generated (kilograms per capita)
	X <sub>15</sub>	Annual freshwater abstraction (Cubic metres per inhabitant)
<b>Eco-behaviors</b>	X <sub>16</sub>	Final Energy Consumption (Thousand tonnes of oil equivalent)
	X <sub>17</sub>	Organic crop area fully converted and under conversion (% of total utilized agricultural area)
	X <sub>18</sub>	Domestic biomass consumption (in tones per capita)
	X <sub>19</sub>	Gross inland consumption of renewable energies (Thousand tonnes of oil equivalent)
	X <sub>20</sub>	Urban wastewater treatment plants (Number per 1000 km <sup>2</sup> )
	X <sub>21</sub>	Circular material use rate (Percentage)
	X <sub>22</sub>	Eco-innovation index (EU = 100)
	X <sub>23</sub>	Organizations and sites with eco-management and audit scheme (EMAS) registration (Number)
	X <sub>24</sub>	Share of renewable energy in gross final energy consumption (Percentage)
	X <sub>25</sub>	Environmental tax revenues (% of GDP)
X <sub>26</sub>	Environmental protection expenditure of general government (% of GDP)	

Source: own elaboration

Diagnostic features normalized in the abovementioned way take the value from the interval [0; 1]. The closer the value to unity, the better the situation in terms of the investigated feature, and the closer the value to zero, the worse the situation.

Among the methods for creating synthetic metrics, a non-reference method with the system of constant weights was selected, which was influenced by the previously used normalization method of the investigated features. Taxonomic metrics of green growth for the respective periods were built as follows:

$$z_i^t = \frac{1}{k} \sum_{k=1}^m z_{ik}^t \quad (3)$$

The procedure chosen for evaluating the green growth provided multidimensional comparative analysis, allowing comparison of multi-featured objects. Taxonomic meters were applied, which replaced research description using a set of diagnostic features with one aggregate volume that is a synthetic variable. It allowed a comparison between member states of the EU providing grounds for classifying them into uniform groups characterized by similar levels of green competitiveness.

### 3. Problem Solution

The analysis shows that Sweden achieved the highest level of green competitiveness (Table 2). The taxonomic metric of this country was estimated at 0.6477 and it was the only country in the highest rating group. Four classes of countries were distinguished in terms of the level of the studied phenomenon. The lowest evaluation of the green competitiveness among all 28 member states was Cyprus for which  $z_i$  indicator amounted to 0.3614. Cyprus, together with Greece, Malta and Bulgaria, was assigned to the lowest class IV. It is worth emphasizing that 22 countries (78.6%) failed to achieve at least an average synthetic measure, which testifies to the low level of environmental competitiveness of EU member states.

**Table 2: Classification of 28 EU Member States According to the Value of the Synthetic Measure Describing the Level of Green Competitiveness**

Class	The level of synthetic measure	The number of countries in the class	EU countries
I	above 0.6000	1	Sweden (0.6477)
II	from 0.5000 to 0.6000	5	Croatia (0.5668); Latvia (0.5447); Austria (0.5399); Finland (0.5383); the Netherlands (0.5249)
III	from 0.4000 to 0.4999	18	Slovenia (0.4925); Denmark (0.4874); Hungary (0.4808); Belgium (0.4777); Italy (0.4722); the United Kingdom (0.4666); Slovakia (0.4647); Lithuania (0.4589); Czech Republic (0.4570); Luxembourg (0.4538); Germany (0.4521); Portugal (0.4469); Spain (0.4461); Poland (0.4406); France (0.4336); Ireland (0.4172); Estonia (0.4038); Romania (0.4015)
IV	below 0.4000	4	Greece (0.3913); Malta (0.3865); Bulgaria (0.3755); Cyprus (0.3614)

Source: authors' calculations based on 2000-2016 data from Eurostat and OECD

Deeper analysis showed that only one STB ratio (level of energy consumption by products) was characterized by an outstanding standardized mean value for all the analyzed member

states – 0.3788. Other STB values considerably exceeded 0.5000, whereas for LTB characteristics, the average level of synthetic measures was not exceeded with reference to any ratio covered by the analysis.

Particularly disadvantageous values of indicators were noted with reference to the level of consumption of inorganic fertilizers (0.8215), final energy consumption (0.8130), number of municipal wastewater treatment plants (0.1656) and the number of entities with registered EMAS (0.2139).

On the other hand, if we wish to identify areas with reference to which relatively advantageous standardized average values of synthetic indicator measures were recorded, in addition to the above-mentioned low level of energy consumption by products, without any doubt we should mention indicators describing the percentage of forestland (0.4741), increase in the number of eco-innovations (0.4499) and noise level (0.5081).

It is worth emphasizing that in 2000-2016 for 28 EU member states, in total an improvement was observed in 22 out of 26 indicators covered by the analysis (nearly 85%). The largest progress was made in the utilization of renewable energy sources and reduction of emissions of air pollutants. In turn, a significant problem to be solved has been a high level of overall consumption of energy. In addition, in the analyzed period a decreasing percentage of the proceeds of environmental taxes in the GDP was recorded (Eurostat, 2018; OECD, 2018).

#### 4. Conclusion

From the utility point of view, the resources and values of the environment can be used in socio-economic processes, and at the same time are a value in themselves (climate, landscape). Uneven distribution of natural capital is therefore a source of additional benefits or disadvantages for business entities, regions or countries.

The concept of green competitiveness fits into the framework of the Europe 2020 strategy. One of its priorities is a sustainable growth that means promoting a more resource-efficient, greener, and more competitive economy. The strategy intends to achieve the “20/20/20” climate/energy targets based on a project ‘Resource Efficient Europe’. It is *‘to help decouple economic growth from the use of resources, support the shift towards a low carbon economy, increase the use of renewable energy sources, modernize transport sector and promote energy efficiency’* (European Commission, 2010a).

The article presents the results of assessment of the environmental competitiveness of EU countries in the years 2000-2016. The use of the taxonomic linear ordering method in the research, allowed the classification of the EU countries into one of four classes identified based on their green competitiveness level. In this respect, the best result got Sweden, while the worst - Cyprus. The results of the study show that the overall level of the studied phenomenon is still low. Only 6 out of 28 countries have managed to exceed the average level of the synthetic measure of green competitiveness.

The research results support the usefulness of synthetic metrics for evaluating the level of green competitiveness at the national level. It should be stressed, however, that the research was based only on 26 indicators constructed and selected from the Eurostat and OECD databases. Due to better data availability, it would be possible to expand the set of indicators for the analysis which in turn would lead to more comprehensive evaluation of green competitiveness.

It should be also mentioned that non-model based clustering is one of many tools used for assessing the level of competitiveness and development of territorial units. It seems reasonable to continue the studies using other methods of analysis, e.g. Ward's clustering, which would enable confronting the results.

## References

- [1] Aiginger, K., Barenthaler-Sieber, S. and Vogel, J. (2013). *Competitiveness under New Perspectives*. Work Package 301. MS46 "Research paper competitiveness under new perspectives". Working Paper no 44. WWWforEurope, European Commission. Seventh Framework Programme.
- [2] Baumgartner, J. (2008). From Sustainable Development to Management of Sustainable Ecosocial Systems. *Problemy Ekorozwoju/Problems of Sustainable Development*, vol. 3, no 2, pp. 15-19.
- [3] Borys, T. (2005). *Indicators of Sustainable Development* (in Polish). Warszawa-Białystok: Ekonomia i Środowisko.
- [4] Commission of the European Communities (2009). *Mainstreaming Sustainable Development into EU Policies: 2009 Review of the European Union Strategy for Sustainable Development*. COM(2009) 400 final. [online]. [cit.2018-03-03]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52009DC0400&from=EN>.
- [5] European Commission (2010a). *Europe 2020. A Strategy for Smart, Sustainable and Inclusive Growth* [online]. [cit.2016-04-04]. Available at: <http://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007%20-%20Europe%202020%20-%20EN%20version.pdf>.
- [6] European Commission (2010b). *European Competitiveness Report 2009*. Commission staff working document. SEC (2009) 1657 final. [online]. [cit.2018-03-13]. Available at: <https://publications.europa.eu/en/publication-detail/-/publication/0aa58b94-f925-45df-9252-5b0a58f66f20>.
- [7] European Commission (2012). *Connecting Smart and Sustainable Growth through Smart Specialisation*. A Practical Guide for ERDF Managing Authorities. Luxembourg: Publications Office of the European Union.
- [8] Eurostat (2018). *Statistics* [online]. [cit.2018-03-01]. Available at: <http://ec.europa.eu/eurostat/data/database>.
- [9] Hellwig, Z. (1968). Application of the Taxonomic Method to the Countries Typology According to their Level of Development and the Structure of Resources and Qualified Staff (in Polish). *Przegląd Statystyczny*, 4, pp. 307–326.
- [10] Jaśkiewicz, J. (2008). Dilemmas for Sustainable Development in Poland (in Polish). *Problemy Ekorozwoju/Problems of Sustainable Development*, vol. 3, no 1, pp. 33-38.
- [11] Kasztelan, A. (2010). Environmental Competitiveness of Regions – Attempt of Conceptualization (in Polish). *Problemy Ekorozwoju-Problems of Sustainable Development*, vol. 5, no 2, pp. 77-86.
- [12] Kasztelan, A. (2016). Green Competitiveness of the EU Countries. In Kovářová, E., L. Melecký and M. Staničková (eds.). *Proceedings of the 3rd International*

- Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, 2016, pp. 415-424. ISBN 978-80-248-3911-0.
- [13] Kasztelan, A. (2017). Green Growth, Green Economy and Sustainable Development – Terminological and Relational Discourse. *Prague Economic Papers*, 26(4), pp. 487–499, <https://doi.org/10.18267/j.pep.626>.
- [14] Kijek, T. and Kasztelan, A. (2013). Eco-Innovation as a Factor of Sustainable Development. *Problemy Ekorozwoju-Problems of Sustainable Development*, vol. 8, no 2, pp. 103-111.
- [15] Kruk, H. (2010). *Natural Competitiveness of the Regions* (in Polish). Toruń: TNOIK.
- [16] Kijek, A. (2013). *Ryzyko Sektorowe Przemysłu Przetwórczego. Modelowanie i Ocena* (in Polish). Lublin: Wydawnictwo UMCS.
- [17] Kukula, K. (2000). *Zero-Catalyzed Unitarization Method* (in Polish). Warszawa: PWN.
- [18] Łogwiniuk, K. (2011). The Use of Taxonomic Methods in the Comparative Analysis of the Access to the ICT Infrastructure by Schoolchildren in Poland (in Polish). *Economy and Management*, 1/2011, pp.7–23.
- [19] Majerová, I. and Nevima, J. (2016). The Issue of Competitiveness: A Case of Visegrad Group Plus Countries. In Kovářová, E., L. Melecký and M. Staničková (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, 2016, pp. 572-583. ISBN 978-80-248-3911-0.
- [20] OECD (2018). *Statistics* [online]. [cit.2018-03-01]. Available at: [http://www.oecd-ilibrary.org/environment/data/oecd-environment-statistics\\_env-data-en](http://www.oecd-ilibrary.org/environment/data/oecd-environment-statistics_env-data-en).
- [21] Wojarska, D. (2014). Competitiveness of Świętokrzyskie Region against other Polish Regions (in Polish). *Studia i Materiały. Miscellanea Oeconomicae*. Vol. 18, Nr 3, pp. 129-143.

## **Integration of Capital Markets on the Example of the EPS Indicator in Selected European Union Countries. Results of Empirical Research**

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### **Abstract**

*This paper is focused on the integration of the financial markets in the EU expressed by EPS ratio. Whilst the integration of the financial markets to date is a fact, yet it needs to be furthered. 561 listed companies selected among the EU member states have been subject to the analysis. The analysis comprised the following EPS factors: industry concentration, liquidity ratio, company age, company growth, capital intensity, company size, total debt ratio, risk market share, international activity and assets turnover. There are significant differences to be noted within ESP values for the listed production sector companies from Western and Eastern Europe, whilst the ESP ratios can be considered relatively similar. The crucial indicators include the size of a company and its international activity.*

**Keywords:** capital market integration, earnings per share, EU, manufacturing companies

**JEL Classification:** G15, G39, L60

### **1. Introduction**

To date integration within the EU has taken a volatile course and it brought about success as well as failures. A part of EU legislation was passed as obligatory for the member states and some other part on discretionary basis. The latter was mostly largely spread in time and it brought about partial success. The EU Directives for Accounting can be quoted as such example. They should be incorporated by the national legislation to allow the players on the capital markets comparing financial information of listed companies. It took the EU member states almost twenty years to implement Directive IV for Accounting. A real breakthrough in that process became the obligation to comply with the directive by the selected IFRS listed companies (Grabiński, Kędzior, Krasodomska, 2013, p. 168). Further, more thorough integration of the EU legislation seems prerequisite in view of the on-going globalization, increased international competition or finally rising global anxiety. According to the surveys the support amongst numerous EU states for the integration has been high (Dian, 2005).

From the historical perspective, the integration of the securities markets started in the early 1980s, and it reached its high following 1996. Bringing euro currency to the member states made the process more dynamic, and the European Securities market grew in importance. Stabilization of currency rates fluctuations which resulted from launching euro as a common

currency made an important impact on the development of European securities market (Fratzscher, 2002, pp. 165-193). The introduction of euro increased the transparency of capital markets, standardized the methods of fixing prices on capital markets, and lowered the transaction costs for the investors. The absence of detailed regulations bringing order to stock exchanges turnover might hinder the process of integration of the European capital markets (Hardouvelis, Malliaropulos, Priestley, 2006. pp. 365-392).

It was also confirmed that the segmentation of capital markets is much deeper along the line of the EU member states and the other countries. Interestingly enough, it was not noted that the introduction of euro caused a substantial segmentation of stock markets between the euro zone and the other EU member states (Bekaert, Harvey, Lundblad, Siegel, 2013, pp. 583-603). It should be noted, however, that within the EU the development of local capital markets is very diverse indeed. Within the EU member states, stock market capitalization of listed companies of individual countries divided by GDP fluctuates between a few percentage points to over a 100%. It seems that the integration of capital markets initiated by the EU is especially desirable for the member states showing a relatively low development of capital markets (Guiso, Jappelli, Padula, Pagano, 2004. pp. 524-577).

In view of K. Adam, T. Jappelli, A. Menichini, M. Padula, M. Pagano (2002, pp. 1-95) there are three basic concepts for the evaluation and analysis of the financial market integration. We should distinguish the indexes of credit market and bond market integration, stock market integration, indexes of integration of economic decisions made by the companies and households as well as the indexes of institutional differences integration. This paper will focus on the financial decisions and integration of listed companies shown on the example of earnings per share (EPS).

There are numerous papers analysing the values of EPS measure and its determinants. Most commonly, the analysis included the internal factors dependent on an economic entity (Babalola, 2013. pp. 90-94; Spanos, Zaralis, Lioukas, 2004, pp. 139-165; Omil, Lorenzo, Liste, 2011, pp. 29-42; Korkmaz, Karaca, 2014, pp. 21-29; Baños-Caballero, García-Teruel, Martínez-Solano, 2012, pp. 517-529). The literature also included the analysis of the external factors (Tan, Floros, 2012, pp. 267-273; Dischinger, Riedel, 2009, pp. 1-35; Derbali, 2011, pp. 1256-1269; Pervan, Kramaric, 2010, pp. 231-238; Alexiou, Sofoklis, 2009, pp. 93-118). This paper will focus mostly on macroeconomic factors which are dependent on a company, industry concentration, liquidity ratio, company age, company growth, capital intensity, company size, total debt ratio, risk market share, international activity and assets turnover. Most of them were empirically verified within a limited scope, especially in the companies from Eastern Europe. Regrettably, there are no comparisons of EPS factors and the factors affecting EPS amongst the companies from Eastern and Western Europe. Hence, this paper is poised to analyse the integration of the EU capital markets with the use of EPS factor and its determinants within elected countries of Western and Eastern Europe.

## **2. Determinants of EPS and Their Characteristics**

The analysis will include the internal factors dependent on a company which determine EPS factor such as: industry concentration, liquidity ratio, company age, company growth, capital intensity, company size, total debt ratio, risk market share, international activity and assets turnover. Company age, industry concentration, international activity and market share are relatively new factors. Other factors were not included in the comparative analysis of Western and Eastern European companies.

Concentration of the market share within a sector exerts an important impact on the EPS value. Most often, the operational, investment, and frequently financial advantage allows a small number of business entities conquer a large part of the market in terms of operating activity. Concentration of the market share within a sector may be attributable to the informal agreements among the most important players (Lee, Mahmood, 2009, pp. 351–380). Large players in a sector usually generate high profits and frequently sustain their dominant position over a long time. High concentration of the market share usually results in high prices, hence there are conditions conducive for generating high EPS value. We must not forget about the economies of scale and the possibility to affect the competitive companies, customers or contractors (Czarnitzki, Kraft, 2010, pp. 1941–1953). Hence, it is necessary to assume positive relationship between the concentration of the market share and the value of EPS.

Profitability ratios, including EPS are strongly influenced by the financial liquidity of economic entities. Highly liquid companies are less prone to insolvency. They are more flexible to react to volatile changes in their economic environment (Goddard, Tavakoli, Wilson, 2005, pp. 1269–1282). Once a company maintains a safe level of liquidity, its development is more sustainable (Maślanka, 2014, pp. 223-256; Maślanka, 2009, pp. 260-270). In addition, high liquidity allows implementation of a greater number of investment projects. Yet, excessive liquidity exerts a negative impact on EPS. It reflects the implementation of objectives by the managers, (minimization of risk and preserving their positions) which do not have to be the owners. Under such circumstances the opportunity costs rise, and the ROA usually deteriorates (Goddard, Tavakoli, Wilson, 2005, pp. 1269–1282). Hence, a negative relationship should be assumed between liquidity and EPS.

Investment potential of an enterprise understood as a dynamics of revenues from operating activity also makes an impact on EPS, allowing implementing highly profitable projects. Most often, the implemented projects bring increased revenue from sales, which translates into higher profits and EPS (Spanos, Zaralis, Lioukas, 2004, pp. 139–165). Nevertheless, it should be noted that the excessive, unsustainable development of a company may bring about increased risk and imbalance in many aspects of entity's functioning. It is also important whether the development is based on investment diversification (Glancey, 1998, pp. 18–27). To conclude, we should assume positive relationships between development possibilities and EPS.

Capital intensity determines many processes of an economic entity. High capital expenditure on operating assets causes an extensive development of a company, yet they do not necessarily improve its financial performance (Kotha, Nair, 1995, pp. 497–518). Such partnerships manage their assets in a less efficient way, which is reflected by the financial results. Hence, there may appear adverse relationships between capital expenditure and the rate of return. A part of the financial result must be used to finance the external cost of capital (Feeny, Rogers, 1999). Insufficient operating efficiency, usually connected with high indebtedness, will make capital intensity to be negatively connected with EPS ratio values.

The size of a company also affects the profitability of economic entities understood in various ways, including EPS. Large companies enjoy high cost efficiency, the economies of scale, and they influence in various ways the players on the market. Hence, the ratio of EPS should be high for large companies (Majumdar, Sen, 2010, pp. 33–45; Nunes, Serrasqueiro, Leitão, 2010, pp. 1313–1341). As a rule, large companies have highly skilled managers in executive positions, hence it is more likely that EPS will be high in large companies. In addition, these are relatively stable companies, of large market potential, a lower cost of capital in comparison to less credible (smaller) partnerships (Babalola, 2013, pp. 90–94). The adverse elements include higher agency costs, short-term motivation of managers, large impact on the



environmental issues, or the potential political costs. A positive relationship should be assumed between the size of a company and EPS ratio.

Indebtness also makes a significant impact on EPS ratio value. In most cases, moderate debt ratio makes a good impact on EPS (Qian, Li, 2003, pp. 881–887). As a result of indebtedness, the disposable capital of a company increases. Yet, that increase involves higher risk for a company. In that way, debt brings more discipline to the management, lowers the margin of errors, enforces efficient management of resources and implementation of profitable investment projects (Joh, 2003, pp. 287–322). It should be remembered that in most cases cost of debt financing is lower than equity financing. However, excessive leverage lowers the flexibility of functioning whilst increasing the risk for the company and the cost of capital. On the final count, an adverse relationship should be assumed between EPS and indebtedness.

The classical theory of economics formulates a positive relationship between risk and revenue (EPS). Higher risk translates into the expected higher rate of return from securities. In literature, risk is most commonly measured with the volatility of the financial result (Nunes, Serrasqueiro, Leitão, 2010, pp. 1313–1341). The higher volatility of that result, the higher anxiety and risk. It is particularly acute in highly competitive sectors, particularly in terms of prices as well as in the sector of small and medium companies (Qian, Li, 2003, pp. 881–887). Quite frequently companies encumbered with high risk cannot implement profitable, albeit risky investment projects, which has a bearing on the present and future value of EPS ratio. Hence, it should be assumed that the relationship between EPS and risk is positive.

Operating on international markets mostly makes a positive impact on EPS value. Companies may trade on various markets, hence they are not dependent solely on prices and the local demand (Lin, Rowe, 2006, pp. 120–141). Presence on many markets often raises innovation and care for building brand and development of new products. Operating globally increases the acquisition of valuable knowledge about markets, about products, consumer behavior, new market trends (Qian, Li, 2003, pp. 881–887). Beyond any doubt, the benefits include international diversification of products, co-ordination of procurement or R&D in global dimension, or minimization of payroll costs (Qian, Li, 2002, pp. 325–335). Hence, the relationship between international operation and EPS ratio value is positive.

EPS ratio is also affected by assets turnover, which expresses the operating efficiency of an economic entity. Once the dynamics of revenue is higher than assets, the efficiency increases (Chi, Padgett, 2006, pp. 28–50). The higher operating efficiency, the higher value of EPS ratio. Usually, high assets turnover translates into higher development possibilities and higher profitability. The companies practicing cost leadership strategy are usually characterized by the efficient use of assets (high assets turnover ratio). However, it seems that it affects to a greater extent profitability of mature companies (Dickinson, 2011, pp. 1969–1994). It should be assumed that assets turnover ratio makes a positive impact on EPS.

The dependencies between the age of a company and profit per share merit our attention. Older companies usually have better experience on the market, more experienced management, a better reputation (goodwill). They are mostly mature companies, with a proven track record which yields positive financial results (Malik, 2011, pp. 315–321). Besides, those companies show lower volatility of profits, large share of long-term investment assets, higher cost efficiency due to the economies of scale (Pástor, Pietro, 2003, pp. 1749–1790; Babalola, 2013, pp. 90–94). Nevertheless, it should be also noted that younger companies can successfully compete with the older ones as they operate faster devoid of bureaucratic barriers, implement fast changes and demonstrate faster development (Markman, Gartner, 2002, pp. 65–75). Consequently, positive relationships should be assumed between EPS and the age of a company.

The definitions of variables are listed below:

- $\text{EPS} = \text{net financial result} / \text{quantity of issued shares}$ ,
- $\text{liquidity} = \text{current liabilities} / \text{current assets}$ ,
- $\text{capital intensity} = \text{fixed assets} / \text{total assets}$ ,
- $\text{assets turnover} = \text{revenues from operating activity} / \text{asset value}$ ,
- $\text{indebtness} = (\text{value of short-term and long-term liabilities}) / \text{total liabilities and equity capital}$ ,
- $\text{risk} = \text{standard EBIT deviation for the past 4 years}$ ,
- $\text{company size} = \ln(\text{current revenues})$ ,
- $\text{age of a company} = \text{years on the market}$ ,
- $\text{development potential} = \text{annual percentage increase of current revenues}$ ,
- $\text{international operation} = \ln(\text{the number of foreign branches})$ ,
- $\text{share in a sector} = \text{the volume of operating activity revenues of four largest entities in a sector} / \text{the sum of operating activity revenues of all entities in a sector}$ ,
- $\text{market share} = \text{operating revenues of an entity} / \text{total revenue from operating activity of all companies in a sector}$ .

### 3. Empirical Results

Empirical material has been collected from 561 listed companies from 10 EU states, with 2805 observations that were conducted. Primarily, the analysis of the empirical material included the analysis of average values, standard deviation, median, minimum values, maximum values, the first and the third EPS quartile in the selected countries of Western and Eastern Europe. Mann-Whitney and Kruskal-Wallis test were used to compare across countries and regions (tables 1-3) since lack of normality in EPS' distribution was detected (with Shapiro-Wilk test). Pairwise Mann-Whitney test with Bonferroni correction were used as a post-hoc analysis in case of significance of Kruskal-Wallis test. Correlations between EPS and other quantitative variables were examined with Spearman's rank correlation coefficient, again due to lack of normality in EPS (tables 4-5). Linear regression was applied (tables 6-7) to find correlations between chosen variables and EPS. Extend to which examined features explain variation in EPS was quantified by R2 coefficient.

We did not note normal EPS distribution within the countries included in the analysis (p-value from Shapiro-Wilk test below 0.05), hence Kruskal-Wallis test was applied (Table 1). In Kruskal-Wallis test, p-value is smaller by 0.05, hence statistically significant differences were noted between particular countries. To answer the question which countries differed from others, the analysis by Mann-Whitney post-hoc tests with Bonferroni correction was applied. The analysis showed that EPS for French and German companies was significantly higher than for Finnish companies. In turn, the latter was much higher than EPS for Greek and British companies. Hence, distinctive differences were observed in the values of EPS ratio amongst the selected companies from Western Europe. It follows that the integration of the capital markets of Western Europe should be furthered.

**Table 1: EPS Ratio for Listed Production Companies in the Selected Countries of Western Europe**

Country	EPS							p	post-hoc *
	Average	SD	Median	Min	Max	Q1	Q3		
<b>Finland</b>	0.83	1.09	0.78	-3.22	4.05	0.10	1.45	p<0.001	B
<b>France</b>	8.07	25.48	1.2	-23.1	192.02	-0.02	4.36		C
<b>Germany</b>	9.93	36.98	1.64	-111.42	513.13	0.14	6.75		C
<b>Greece</b>	0.33	1.89	0.12	-4.57	20.24	-0.12	0.39		A
<b>Great Britain</b>	0.37	2.49	0.12	-41.56	54.13	0.00	0.43		A

\* – The results of post-hoc analysis. No significant statistical differences found for the countries denoted with the same letter.

Source: Author's own elaboration

The distribution for EPS for the countries of Eastern Europe was not normal either (p-value of Shapiro-Wilk test dropped below 0.05), and for this reason Kruskal-Wallis test was applied. The p-value of that test is below 0.05, which indicates that there were significant statistical differences among particular countries. Post-hoc Mann-Whitney test with Bonferroni correction was used to visualize the differences between the countries. The analysis showed that EPS for Slovenian and Slovak companies was much higher than EPS of Lithuanian, Latvian and Polish companies (Table 2). Yet, EPS of Polish companies was much higher than the values for Lithuanian companies. It follows that the integration of capital markets of the selected Eastern European countries should be furthered.

**Table 2: The Analysis of EPS Ratio for Listed Production Partnerships in the Selected Countries of Eastern Europe**

Country	EPS							p	post-hoc *
	Average	SD	Median	Min	Max	Q1	Q3		
<b>Latvia</b>	0.29	0.7	0.14	-2.09	2.52	0.01	0.45	p<0.001	AB
<b>Lithuania</b>	0.21	0.59	0.02	-0.14	2.35	-0.02	0.14		A
<b>Poland</b>	0.68	2.31	0.14	-4.41	26.69	0.02	0.48		B
<b>Slovakia</b>	6.19	20.05	0.96	-8.09	164.6	-1.36	6.09		C
<b>Slovenia</b>	3.25	11.96	1.22	-50.1	49.22	0.11	3.69		C

\* – The results of post-host analysis. No significant statistical differences found for the countries denoted with the same letter.

Source: Author's own elaboration, based on M. Kędzior (2017)

Further analysis considered values of ESP ratio for two groups of countries: those from Western and Eastern Europe. EPS values did not display a normal distribution within the analysed parts of Europe (p-value of Shapiro-Wilk test below 0.05), and for this reason Mann-

Whitney test was applied. P-value of that test fell below 0.05, hence it could be asserted that EPS values for Eastern Europe differed significantly (i.e. it was much lower) from ESP of Western European countries (table 3). The differences between the mentioned geographic regions should be perceived as significant, hence further integration of West and East European capital markets is a must.

**Table 3: The Analysis of EPS Ratio for Listed Production Companies in the Selected Countries of Western and Eastern Europe**

Europe	EPS							p
	Average	SD	Median	Min	Max	Q1	Q3	
Eastern	1.53	8.30	0.16	-50.1	164.6	0.01	0.72	p<0.001
Western	4.16	21.89	0.30	111.42	513.13	0.00	1.61	

Source: Author's own elaboration

Table 4 presents the results of correlation analysis among the selected EPS factors for the production sector listed companies of Eastern Europe. Almost all factors should be considered statistically significant, with the exception of industry concentration and indebtedness. The results prove the negative impact of liquidity and capital intensity whilst a positive impact of company's age, development potential, the size of a company, risk, international operation and assets turnover. EPS is mostly determined by the size of a company, market share and international operation. Majority of factors is statistically significant at  $p < 0,001$ .

**Table 4: Correlation Factors of EPS and Its Determining Factors in the Selected Listed Production Companies in Western Europe**

Factor	EPS
Industry concentration	-0.004
Liquidity ratio	-0.134***
Company age	0.303***
Company growth	0.232***
Capital intensity	-0.061**
Company size	0.518***
Total debt ratio	-0.001
Risk	0.286***
Market share	0.427***
International activity	0.349***
Assets turnover	0.215***

\*\*\* correlation significant with  $p < 0,001$ , \*\* correlation significant with  $p < 0,01$ , \* correlation significant with  $p < 0,05$

Source: Author's own elaboration

Table 5 presents the results of the analysis of factors affecting EPS in the production sector listed companies from Eastern Europe. Statistically significant factors include all the factors with the exception of indebtedness and share in the sector (similarly to companies from Western Europe). The table indicates negative impact of liquidity and capital intensity on ESP as well as the positive impact of the age of a company, its growth potential, the size of an entity, risk, operating on international scale, share in the market and assets turnover. It should be noted that the dependencies between the selected factors and ESP are identical with those presented for Western European countries. Within that group, the most significant factors included the size of a company, its market share and risk. The initial analysis of ESP determinant factors seems to show their similarity.

**Table 5: Correlation Factors Between EPS and Its Determining Factors in Listed Production Companies in the Selected Countries of Eastern Europe**

Factor	EPS
Industry concentration	0.072
Liquidity ratio	-0.105**
Company age	0.210***
Company growth	0.267***
Capital intensity	-0.078*
Company size	0.478***
Total debt ratio	-0.032
Risk	0.282***
Market share	0.320***
International activity	0.234***
Assets turnover	0.235***

\*\*\* correlation significant with  $p < 0,001$ , \*\* correlation significant with  $p < 0,01$ , \* correlation significant with  $p < 0,05$

Source: Author's own elaboration, based on M. Kędzior (2017)

Tables 6 and 7 present the analysis of a pooled model. The companies from Western Europe indicate a larger number of statistically significant EPS determinants. They include share in the sector, the age of a company, international operation and assets turnover. The biggest impact is made by capital intensity, assets turnover and the size of a company.

**Table 6: Regression Analysis of Factors Affecting EPS in Listed Production Sector Companies in the Selected Countries of Western Europe**

Variables	Parameter	95% confidence interval		p-value
Industry concentration	-0.096	-0.185	-0.007	p=0.035*
Liquidity ratio	1.650	-0.564	3.864	p=0.144
Company age	0.048	0.029	0.067	p<0.001***
Company growth	0.001	-0.007	0.009	p=0.819
Capital intensity	-10.097	-16.019	-4.175	p=0.001***
Company size	3.400	2.546	4.254	p<0.001***
Total debt ratio	-3.725	-7.689	0.239	p=0.065
Risk	0.00	0.00	0.00	p=0.256
Market share	-0.12	-0.208	-0.032	p=0.008**
International activity	-2.869	-4.073	-1.665	p<0.001***
Assets turnover	-3.985	-5.491	-2.478	p<0.001***
<b>R<sup>2</sup></b>	<b>24.86</b>			

\*\*\* dependency significant with  $p<0,001$ , \*\* dependency significant with  $p<0,01$ , \* dependency significant with  $p<0,05$

Source: Author's own elaboration.

The number of statistically significant factors for the selected listed production sector companies from Eastern Europe is smaller, yet their joint impact on ESP is greater than it was demonstrated by the companies from Western Europe. The significant factors include the size of a company, indebtedness and international operation. From that perspective, the integration of capital market seems much more likely than anticipated. For both groups of countries. ESP factors are relatively similar, even though there are some discernible differences.

**Table 7: Regression Analysis of EPS Factors for Listed Production Sector Companies within the Selected Countries of Eastern Europe**

Variables	Parameter	95% confidence interval		p-value
Industry concentration	0.022	-0.026	0.069	p=0.368
Liquidity ratio	-0.82	-1.799	0.16	p=0.101
Company age	0.012	-0.003	0.028	p=0.11
Company growth	0.00	0.00	0.00	p=0.802
Capital intensity	3.488	-0.137	7.112	p=0.059
Company size	1.031	0.619	1.442	p<0.001***
Total debt ratio	-3.73	-6.559	-0.901	p=0.01**
Risk	0.00	0.00	0.00	p=0.323
Market share	-0.009	-0.126	0.109	p=0.884
International activity	-1.038	-1.574	-0.502	p<0.001***
Assets turnover	-0.132	-1.194	0.929	p=0.807
<b>R<sup>2</sup></b>	<b>24.86</b>			

\*\*\* dependency significant for <0,001, \*\* dependency significant for p<0,01, \* dependency significant for p<0,05

Source: Author's own elaboration, based on M. Kędzior (2017).

#### 4. Conclusion

In summary, it is worth noting that further European integration is imminent despite numerous legal, economic or cultural barriers. The integration of capital markets within EU has been progressing even though it could have been more rapid. Beyond any doubt, the introduction of euro, a common currency in some EU states was a significant factor which accelerated the formation of the European capital market. It lowered the transaction costs, currency volatility and the risk level.

The integration of capital markets calculated with EPS produced quite interesting results. It should be stressed that there are some significant differences in EPS ratio values of listed production sector companies in Western and Eastern Europe. Within the group of Western European countries, the highest EPS ratio values were found in German and French companies, whilst among Eastern European countries, the companies from Slovenia and Slovakia showed highest values. EPS ratio of Polish companies remained relatively low. From that perspective, it is postulated to promote larger integration of capital markets. The most important EPS determinant factors remain relatively similar. There is a larger number of EPS determining factors in Western European companies, whilst their joint impact is greater among the companies from Eastern Europe. The size of a company and international operation are to be considered the most important EPS determinant factors.

Future research may include a larger number of countries. It seems advisable to include in the analysis some other macroeconomic factors such as those describing corporate governance or institutional environment, i.e. the development of securities exchanges, banking systems, freedom of investment or freedom of economic activity.

## References

- [1] Adam, K., Jappelli, T., Menichini, A., Padula, M. and Pagano, M. (2002). Analyse, Compare, and Apply Alternative Indicators and Monitoring Methodologies to Measure the Evolution of Capital Market Integration in the European Union. *Report to the European Commission*, pp. 1-95.
- [2] Alexiou, C. and Sofoklis, V. (2009). Determinants of Bank Profitability: Evidence from the Greek Banking Sector. *Economic Annals*, vol. 54, iss. 182, pp. 93-118
- [3] Babalola, Y.A. (2013). The Effect of Firm Size on Firms Profitability in Nigeria. *Journal of Economics and Sustainable Development*, vol. 4, iss. 5, pp. 90-94.
- [4] Baños-Caballero, S., García-Teruel, P.J. and Martínez-Solano, P. (2012). How does Working Capital Management affect the Profitability of Spanish SMEs?. *Small Business Economics*, vol. 39, iss. 2, pp. 517-529.
- [5] Bekaert, G., Harvey, C. R., Lundblad, C. T. and Siegel, S. (2013). The European Union, the Euro, and Equity Market Integration. *Journal of Financial Economics*, vol. 109, iss. 3, pp. 583-603.
- [6] Chi, J. and Padgett, C. (2006). Operating Performance and its Relationship to Market Performance of Chinese Initial Public Offerings. *Chinese Economy*, vol. 39, iss. 5, pp. 28-50.
- [7] Czarnitzki, D. and Kraft, K. (2010). On the Profitability of Innovative Assets. *Applied Economics*, vol. 42, iss. 15, pp. 1941-1953.
- [8] Derbali, A. (2011). Determinants of Banking Profitability before and during the Financial Crisis of 2007: The Case of Tunisian Banks. *Interdisciplinary Journal of Contemporary Research in Business*, vol. 3, iss. 3, pp. 1256-1269.
- [9] Dickinson, V. (2011). Cash Flow Patterns as a Proxy for Firm Life Cycle. *The Accounting Review*, vol. 86, iss. 6, pp. 1969-1994.
- [10] Dinan, D. (2005). *Ever Closer Union: an Introduction to European Integration*. Basingstoke, Hampshire.
- [11] Dischinger, M. and Riedel, N. (2009). There's no Place like Home: the Profitability Gap between Headquarters and their Foreign Subsidiaries. *CESifo Working Paper No. 2866*, pp. 1-35.
- [12] Feeny, S., Harris, M.N. and Rogers, M. (2005). A Dynamic Panel Analysis of the Profitability of Australian Tax Entities. *Empirical Economics*, vol. 30, iss. 1, pp. 209-233.
- [13] Fratzscher, M. (2002). Financial Market Integration in Europe: on the Effects of EMU on Stock Markets. *International Journal of Finance & Economics*, vol. 7, iss. 3, pp. 165-193.
- [14] Glancey, K. (1998). Determinants of Growth and Profitability in small Entrepreneurial Firms. *International Journal of Entrepreneurial Behavior & Research*, vol. 4, iss. 1, pp. 18-27.
- [15] Goddard, J., Tavakoli, M. and Wilson, J.O.S. (2005). Determinants of Profitability in European Manufacturing and Services: Evidence from a Dynamic Panel Model. *Applied Financial Economics*, vol. 15, iss. 18, pp. 1269-1282.



- [16] Grabiński, K., Kędzior, M. and Krasodomska J. (2013). *Globalne uwarunkowania rachunkowości: systemy, procesy, zmiany*. Warszawa: Polskie Wydawnictwa Ekonomiczne S.A.
- [17] Guiso, L., Jappelli, T., Padula, M. and Pagano. M. (2004). Financial Market Integration and Economic Growth in the EU. *Economic Policy*, vol. 19, iss. 40, pp. 524-577.
- [18] Hardouvelis, G. A., Malliaropulos, D. and Priestley. R. (2006). EMU and European Stock Market Integration. *The Journal of Business*, vol. 79, iss. 1, pp. 365-392.
- [19] Hvozdenká, J. (2016). Which Government Bond Spread Predicts the Future Economic Growth the Best. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 376 – 382.
- [20] Joh, S.W. (2003). Corporate Governance and Firm Profitability: Evidence from Korea before the Economic Crisis. *Journal of Financial Economics*, vol. 68, iss. 2, pp. 287-322.
- [21] Kędzior, M. (2017). Zysk na jedną akcję i jego determinanty w publicznych spółkach produkcyjnych w wybranych państwach Europy Środkowo-Wschodniej. *Zeszyty Teoretyczne Rachunkowości*, vol. 95 iss. 151, pp. 41-58.
- [22] Korkmaz, Ö. and Karaca S.S. (2014). Üretim İşletmelerinde Firma Karlılığının Finansal Belirleyicilerine BİST İmalat Sanayi Uygulaması. *Ege Academic Review*, vol. 14, iss. 1, pp. 21-29.
- [23] Kotha, S. and Nair. A. (1995). Strategy and Environment as Determinants of Performance: Evidence from the Japanese Machine tool Industry. *Strategic Management Journal*, vol. 16, iss. 7, pp. 497-518.
- [24] Lee, C.Y. and Mahmood. I.P. (2009). Inter-industry Differences in Profitability: the Legacy of the Structure–efficiency Debate Revisited. *Industrial and Corporate Change*, vol. 18, iss. 3, pp. 351-380.
- [25] Lin, S. and Rowe. W. (2006). Determinants of the Profitability of China's Regional SOEs. *China Economic Review*, vol. 17, iss. 2, pp. 120-141.
- [26] Majumdar, S. and Sen. K. (2010). Corporate Borrowing and Profitability in India. *Managerial and Decision Economics*, vol. 31, iss. 1, pp. 33-45.
- [27] Malik, H. (2011). Determinants of Insurance Companies Profitability: an Analysis of Insurance Sector of Pakistan. *Academic Research International*, vol. 1, iss. 3, pp. 315-321.
- [28] Markman, G.D. and Gartne. W.B. (2002). Is Extraordinary Growth Profitable? A Study of Inc. 500 High Growth Companies. *Entrepreneurship Theory and Practice*, vol. 27, iss. 1, pp. 65-75.
- [29] Maślanka, T. (2009). *Płynność a rentowność – wyniki badań empirycznych polskich podmiotów gospodarczych za okres 1995 – 2007*. Zeszyty Naukowe Uniwersytetu Szczecińskiego, vol. 549, iss. 39, pp. 260 – 270.
- [30] Maślanka, T. (2014). *Płynność finansowa a rentowność przedsiębiorstw*. [in:] Z. Dresler (ed.) *Rentowność przedsiębiorstw w Polsce*. Kraków: Wydawnictwo Uniwersytetu Ekonomicznego w Krakowie, pp. 223 – 256.

- [31] Nunes, P.M., Serrasqueiro, Z.S. and Leitão. J. (2010). Are there Nonlinear Relationships between the Profitability of Portuguese Service SME and its Specific Determinants?. *The Service Industries Journal*, vol. 30, iss. 8, pp. 1313-1341.
- [32] Omil, J.C., Lorenzo, P.C. and Liste. A.V. (2011). The Power of Intangibles in High-Profitability Firms. *Total Quality Management*, vol. 22, iss. 1, pp. 29-42.
- [33] Pervan, M. and Kramaric. T.P. (2010). Determinants of Insurance Companies' Profitability in Croatia. *The Business Review*, vol. 16, iss. 1, pp. 231 – 238.
- [34] Qian, G. and Li. J. (2002). Multinationality, Global Market Diversification and Profitability among the Largest US Firms. *Journal of Business Research*, vol. 55, iss. 4, pp. 325-335.
- [35] Qian, G. and Li. L. (2003). Profitability of Small-and Medium-sized Enterprises in High-tech Industries: the Case of the Biotechnology Industry. *Strategic Management Journal*, vol. 24, iss. 9, pp. 881-887.
- [36] Spanos, Y.E., Zaralis, G. and Lioukas. S. (2004). Strategy and Industry Effects on Profitability: Evidence from Greece. *Strategic Management Journal*, vol. 25, iss. 2, pp. 139-165.
- [37] Tan, Y. and Floros. C. (2012). Bank Profitability and GDP Growth in China: A Note. *Journal of Chinese Economics and Business Studies*, vol. 10, iss. 3, pp. 267-273.
- [38] Zemplerova, A. (2016). Impact of Bank Bailouts on the European Integration. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 1111 – 1119.

## **Environmental Protection Expenditure in the EU Countries**

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### **Abstract**

*The processes of European integration and membership in the Union have been successively contributing to the improvement of the situation in many areas of social and economic life of individual countries. One of the areas in which changes take place relatively quickly is the environmental policy. Actions taken at the level of the Community for environmental protection have contributed to a dynamic increase of expenditure for this purpose. Environmental protection expenditure is defined as the amount of money spent on all activities directly aimed at the prevention, reduction and elimination of pollution or nuisances resulting from the production or consumption processes. The main goal of the paper is to present the level and structure of environmental protection expenditure in the European Union countries. The article explains the differences between the investment expenditure and current expenditure. Research was carried out based on the descriptive and comparative analysis methods. For this purpose, Eurostat data for the years 2001-2013 were used. The research results allowed to distinguish 5 groups of countries in terms of the level of environmental protection expenditure.*

**Keywords:** *current environmental expenditure, environment, environmental protection, investment expenditure*

**JEL Classification:** *F36, O57, Q56*

### **1. Introduction**

At the beginning of the 1990s we could see increased dynamics of activities for hindering unfavourable phenomena in relations between society, the economy and the environment. Environmental protection and shaping became one of the fundamental issues for the present-day world (Costanza and Daly, 1992; Rogall, 2010; Drastichová, 2016). The recent financial and economic downturn has increased the dynamics of the processes for implementing the concepts of a 'green' economy and 'green' growth, which will ultimately lead to continuous and fully sustainable development (Kasztelan, 2017; 2016; Rutkowska-Podołowska et al., 2016). The involvement of public and private entities in environmental protection activities is measured by the amount of related expenditure.

One of the factors determining the fulfilment of objectives and tasks set forth in the environmental policy is a sufficient quantity and quality of information. According to Broniewicz (2007), attempts at comprehensive calculation of costs and benefits related to management of the natural environment have been undertaken since about 1970. In 1993, one of the deliverables of the United Nations Conference on the Environment and Development held in Rio de Janeiro (1992) was the publication of System of Integrated Environmental and

Economic Accounts (SEEA). The next year (1994), Statistical Office of UE Eurostat developed the *European System for the Collection of Economic Information on the Environment*, called SERIEE (Eurostat, 1994). It includes basic definitions and methods applied in data collecting of environment protection expenditure. The environmental protection expenditure account (EPEA) is one of two satellite accounts that have been developed within the SERIEE system. In 2002 Eurostat published modification of SERIEE – *SERIEE Environmental Protection Expenditure Accounts – Compilation Guide* (Eurostat, 2002). In 2014, EPEA got a legal basis and was included as the fourth module added to EU Regulation on environmental economic accounts. Regulation (EU) No 538/2014 describes the module for environmental protection expenditure accounts and defines the data to be collected, compiled, transmitted and evaluated by the Member States (Federal Statistical Office of Germany, 2015).

Previous studies concerning expenditure on environmental protection have mostly focused on identifying conditions for environmental protection activities (Aysen, 2014; Haller and Murphy, 2012; Leiter et al., 2011; Kasztelan, 2009), the level and structure of expenses (Broniewicz, 2017; Broniewicz and Domańska, 2016; Ercolano and Romano, 2017; European Communities, 2002) and the effectiveness of environmental protection expenditure (Adewuyi, 2016; Singh et al., 2016; Wang et al., 2014; Charles et al., 2012).

The purpose of the paper is to analyse the level and structure of environmental protection expenditure in the European Union countries. Research was carried out based on the descriptive and comparative analysis methods. For this purpose, Eurostat data for the years 2001-2013 were used. The research results allowed to distinguish 5 groups of countries in terms of the level of environmental protection expenditure.

## **2. Methods of Studies Concerning Environmental Protection Expenditure**

The most versatile source of information about environmental protection spending is EPER (The Joint OECD/Eurostat Questionnaire on Environmental Protection Expenditure and Revenues). This is the main tool for collecting data concerning environmental protection expenditures provided by statistical offices of member states. The questionnaire comprises all sectors of the economy (public, businesses, households and specialised producers of environmental protection services). The EPER questionnaire contains economic variables referring both to own expenditures on environmental protection and to the financing of environmental protection by third parties, i.e.: investment expenditures, own running expenses, revenues from side products, grants/transfers, payments for and purchases of environmental protection services (Olsson and Johansson, 2005b).

The questionnaire is based on CEPA (Classification of Environmental Protection Activities and Expenditure), which in practice means that every variable (expenditure) is assigned to one of 7 areas of environmental protection. The CEPA classification was developed by the UN and it was adopted as an international standard by the Statistical Commission in 2002 (Moe and Braathu, 2014).

According to Eurostat guidelines, environmental protection (EP) expenditure is a sum of investment expenditure and running expenditure on activities related to environmental protection. *Investment expenditure on environmental protection covers all capital expenditures related to environmental protection (including methods, technologies, processes, equipment or its part) with the main objective being collection, disposal, monitoring, reduction, prevention and elimination of environmental pollution or any environmental losses due to investing activities of the business* (Commission Regulation (EC), 2003). According to

the Eurostat methodology, investments in environmental protection comprise fixed assets, that is, land, buildings and structures, machines and equipment and other expenditures related to intangibles and financial assets used for the purposes of environmental protection provided they are amortized.

EP investment expenditure is often defined as a sum of expenditures on pollution treatment (end-of-pipe) investments and investments preventing pollution (so-called integrated technologies). End-of-pipe investments are defined as capital expenditures on methods, technologies, processes or equipment for collecting, reducing, disposing of and treatment of the produced pollutants, preventing their distribution as well as for monitoring the level of pollution. In turn, investments preventing pollution are defined as capital expenditures on new or modification of existing methods, technologies, processes, equipment or its parts oriented at preventing or reducing the amount of pollutants at source, so as to decrease their environmental impact. Irrespective of the type of investment, it is emphasized that in order to be deemed a protective investment its main goal should be environmental protection (Olsson and Johansson, 2005a).

In turn, *running expenses on environmental protection cover costs of labour, rent payments, consumption of energy and other tangible assets as well as the purchase of services with the main objective being collection, disposal, monitoring, reduction, prevention and elimination of environmental pollution or any environmental losses due to investing activities of the business* (Commission Regulation (EC), 2003). Running expenses are exclusive of depreciation of environmental protection equipment and amortisation of taxes and fees not connected with the purchase of environmental protection services.

Running expenses can also be classified according to operating functions as the costs of treatment and reduction of pollution (end-of-pipe) and the costs of preventing pollution (integrated actions). The costs of treatment and reduction of pollution comprise, for example, costs of actions and inspection of equipment used for such purposes, costs of waste collection, treatment and disposal, costs of measuring and monitoring pollution levels. Costs of integrated actions comprise running expenses in connection with the operation of equipment preventing pollution, costs of organisational changes (environmental management), and costs of using new raw materials in production to decrease the level of pollution or other environmental losses caused by business operations.

The allocation of running expenses to own operating expenses and to payments for and purchases of environmental protection services is important from the point of view of total EP expenditure calculation methods. Such allocation underlies the calculation of global expenditures in different sectors and prevents expenditures from being included in calculations more than once.

Own operating expenses include: costs of operation of environmental protection devices and equipment, costs of measuring and monitoring the levels of pollution on the business's own account, costs of purchasing environmental protection goods not directly related to environmental protection equipment, costs of administration and other activities not directly related to environmental protection equipment, and costs of research and development in the area of environmental protection on the business's own account.

The second type of running expenses, in addition to EP payments for financing environmental protection activities, is also inclusive of payments to third parties, including but not limited to payments for: waste collection and treatment, wastewater disposal and treatment, administrative fees for waste discharge authorisations and environmental impact audits (Olsson and Johansson, 2005a).

The paper will present results of analyses of environmental protection expenditure in EU member states in 2001-2013 according to the following criteria: share of respective sectors of economy in environmental protection expenditure (due to a large information gap the household sector was not included); share of EP expenditure in the GDP; level of expenditure per capita; expenditures according to types (investments and running expenses).

### 3. Research Findings

In 2001-2013 the average annual EP expenditure in the public sector (state and local government expenditure) in the EU amounted to nearly EUR 78 billion, increasing by nearly 40% in the analyzed period from a level of slightly above EUR 62 billion in 2003 to more than EUR 87 billion in 2012. (Table 1).

**Table 1: Average Annual Levels of Environmental Protection Expenditure in EU Countries in the Years 2001-2013 (Million Euro)**

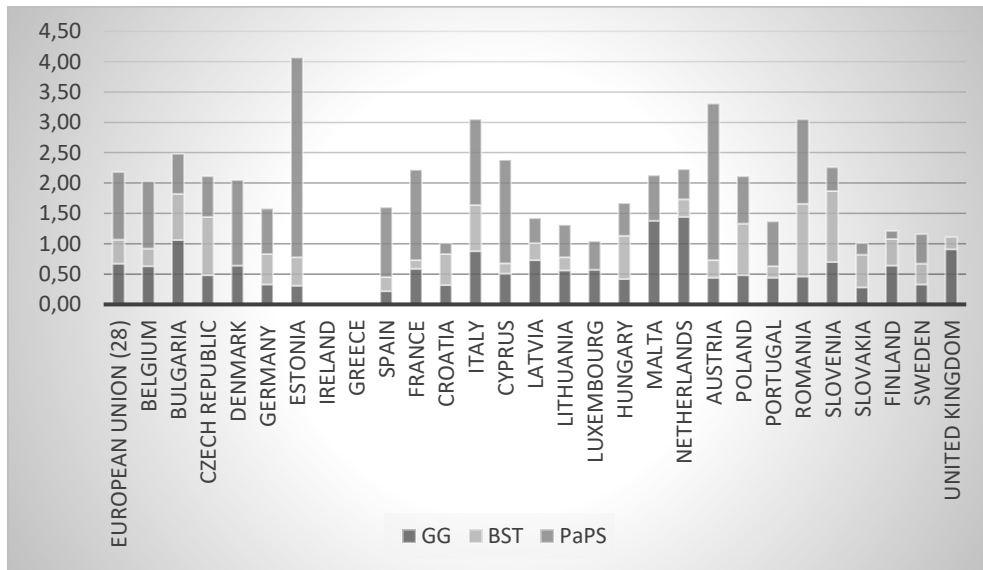
	<b>GG</b>	<b>BST</b>	<b>PaPS</b>
<b>European Union (28 countries)</b>	77911.33	n.a.	124727.15
<b>Belgium</b>	1876.99	1797.27	3074.08
<b>Bulgaria</b>	167.07	300.23	114.71
<b>Czech Republic</b>	672.70	1159.19	781.30
<b>Denmark</b>	1378.69	n.a.	3128.32
<b>Germany</b>	8411.00	11143.00	18762.00
<b>Estonia</b>	25.59	74.11	296.32
<b>Ireland</b>	n.a.	n.a.	n.a.
<b>Greece</b>	n.a.	n.a.	n.a.
<b>Spain</b>	2608.67	4687.41	10193.69
<b>France</b>	10194.46	14384.64	25578.18
<b>Croatia</b>	64.51	287.89	70.67
<b>Italy</b>	12422.84	21995.34	15688.48
<b>Cyprus</b>	81.87	37.76	185.91
<b>Latvia</b>	102.43	60.70	76.22
<b>Lithuania</b>	198.16	124.01	161.67
<b>Luxembourg</b>	211.95	n.a.	193.95
<b>Hungary</b>	440.93	783.34	570.23
<b>Malta</b>	78.05	n.a.	43.69
<b>Netherlands</b>	7993.63	5132.72	2600.60
<b>Austria</b>	1655.35	1893.65	5986.20
<b>Poland</b>	1351.18	3164.85	2598.48
<b>Portugal</b>	797.52	407.35	1239.57
<b>Romania</b>	538.06	906.05	1500.91
<b>Slovenia</b>	258.72	360.75	129.36
<b>Slovakia</b>	131.49	462.23	68.25
<b>Finland</b>	973.13	670.91	239.32
<b>Sweden</b>	1113.83	1185.93	1359.12
<b>United Kingdom</b>	14207.92	4816.56	n.a.

GG - General Government; BST - Business Sector Total (mainly all NACE activities except E37, E38.1, E38.2, E39 and O); PaPS - Private and public specialist and secondary producers of environmental protection services (mainly E37, E38.1, E38.2 and E39); n.a. – not available. Source: author's calculation based on Eurostat data.

In the industry of producers of environmental protection goods and services, the average annual expenditure reached nearly EUR 125 billion, ranging from more than EUR 95 billion in 2001 to nearly EUR 145.5 billion in 2012. However, Eurostat statistics do not provide complete information regarding the level of EP expenditure in the private sector. Residual data makes it possible to only suppose that such expenditure amounted to about EUR 80-90 billion on an annual basis.

The fundamental ratios used in the evaluation of the dynamics of EP expenditure are its share in the GDP and the level per capita. In 2013 the share of EP expenditure in the GDP was 2.18%, whereas in 2001 – 2.16% (Eurostat, 2018). Thus, it can be concluded that it remained unchanged in EU member states in the analyzed period. In countries such as: Estonia, Austria, Cyprus, France, Italy and Denmark, EP expenditures were largely generated by the sector of producers of environmental protection goods and services (Figure 1). To compare, public sector expenditure was predominant in the Netherlands, Bulgaria, the United Kingdom, Malta and Latvia. In turn, in most countries of Central Eastern Europe (Slovenia, Czech Republic, Poland, Hungary, Slovakia and Croatia), according to the ‘polluter pays’ principle, the prevailing portion of environmental protection expenditure was the private sector’s expenses.

**Figure 1: Environmental Protection Expenditure (% of GDP), Last Available Data**

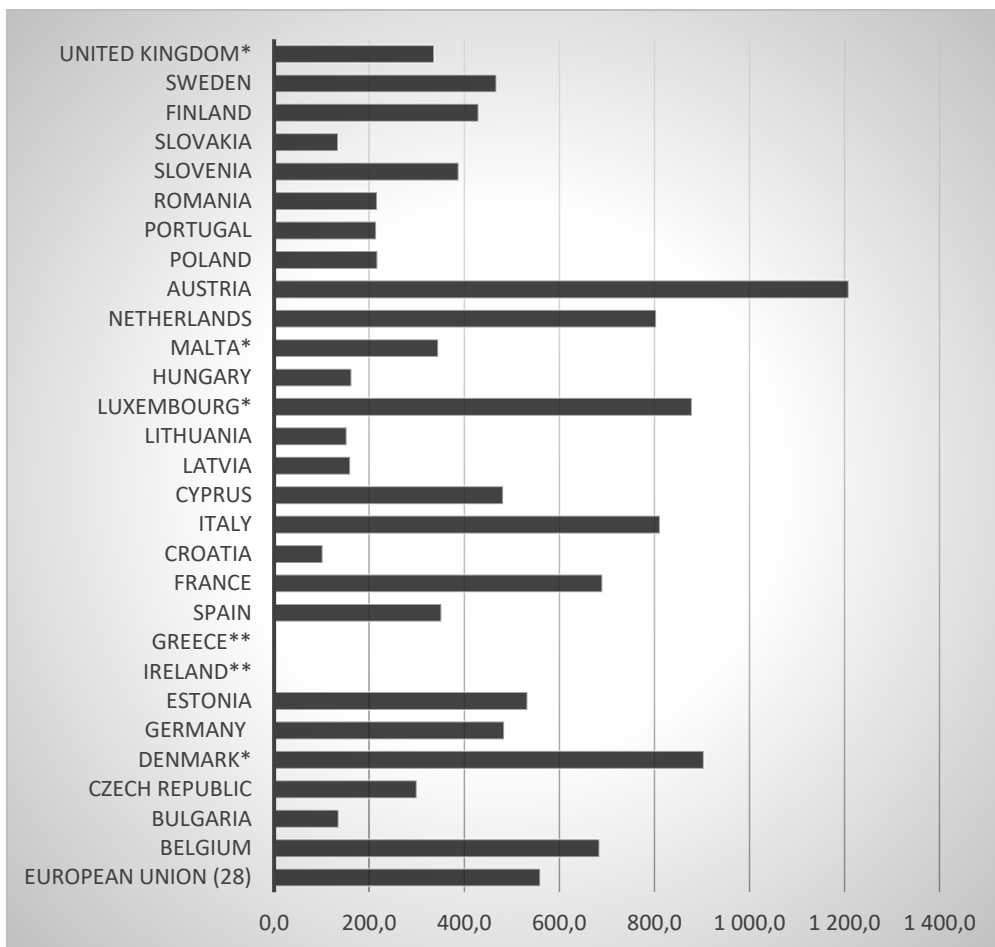


Source: own elaboration based on Eurostat data.

As regards the level of expenditure per capita, clear disparities could be observed between respective countries (Figure 2). Austria (nearly EUR 1209) is definitely the leader, while the lowest expenditure per capita was recorded in Croatia (EUR 102.3). However, it must be remembered that the country only became a member state of the Community in 2013, that is, in the last year covered by the study. It can be believed that in subsequent years environmental protection expenditure increased as a result of the necessity to adopt EU standards.

Information in Table 2 indicates that in only 3 out of 26 EU member states (11.5%), environmental protection expenditure per capita exceeded EUR 1000. On the other hand, in 9 of them (nearly 35%) the level of expenditure was lower than EUR 250, and in 17 (65%) it did not exceed EUR 500.

**Figure 2: Environmental Protection Expenditure (Euro per Inhabitant), Last Available Data**



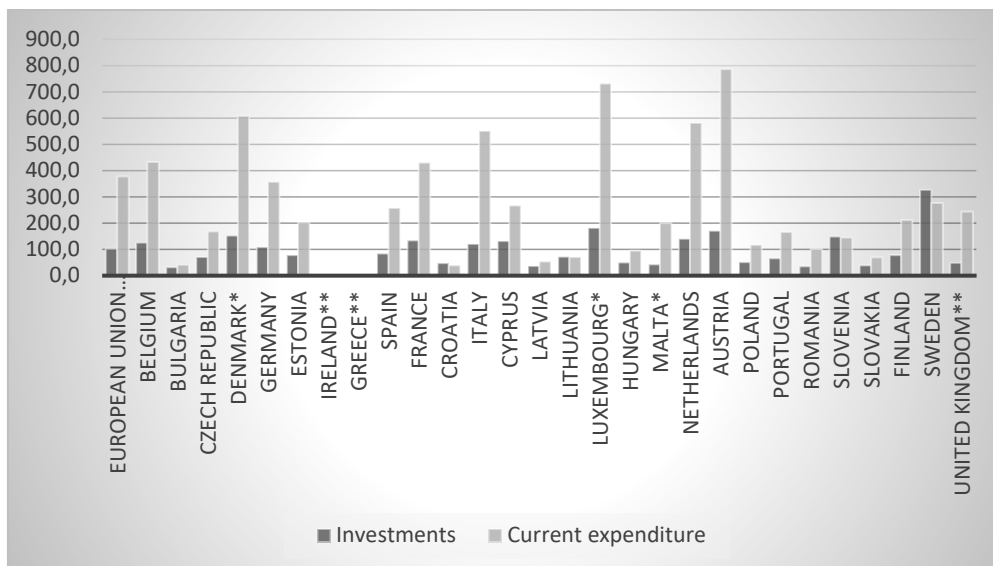
\* - incomplete data; \*\* - data not available  
 Source: own elaboration based on Eurostat data.

**Table 2: Classification of 26 EU Countries According to the Level of Environmental Protection Expenditure**

Group	The number of countries in the group	Euro per inhabitant	EU countries
I	3	1000-1250	Austria, Denmark, Luxembourg
II	2	750-1000	Italy, the Netherlands
III	4	500-750	France, Belgium, Estonia and United Kingdom
IV	8	250-500	Germany, Cyprus, Sweden, Finland, Slovenia, Malta, Spain, Czech Republic,
V	9	0-250	Poland, Romania, Portugal, Hungary, Latvia, Lithuania, Bulgaria, Slovakia, Croatia

Source: own elaboration based on Eurostat data.



**Figure 3: Average Annual Levels of Investment and Current Expenditure for Environmental Protection in EU Countries in the Years 2001-2013 (Euro per Inhabitant)**

Source: author's calculation based on Eurostat data.

The analysis of environmental protection expenditure has also provided information on the types of such expenditure (Figure 3). In the analyzed period, in most EU member states running expenses connected with environmental protection oriented operations of economic entities prevailed. They accounted for nearly 73% of the overall expenditure. The highest level of running expenses was recorded in Austria (about EUR 786 per capita), and the lowest in Croatia (less than EUR 40). In turn, funds allocated to environmental protection investments accounted for about 27% of the overall expenditure, whereas the highest level per capita was noted in Sweden (EUR 326.3), and the lowest in Bulgaria (EUR 31.4). Out of 26 countries for which data could be retrieved, only in 4 were investment expenditures higher than running expenses related to environmental protection, i.e. Croatia, Lithuania, Slovenia and Sweden.

#### 4. Conclusion

For many years the statistical office of Eurostat has attempted to develop a uniform scheme for systematic gathering of data referring to different forms of impact that economic entities have on the environment. Information retrieved in that manner is used for monitoring the effectiveness of environmental protection policy, analysing the economic effects of such policy, e.g. potential impact on the competitiveness of businesses or during environmental impact reviews, for presenting efficient actions undertaken by the member states in order to reduce environmental pressure.

In 2001-2013 a nearly 40% increase in environmental protection expenditure was noted in the member states of the EU, which must be attributed to the phenomenon of 'greening' the social and economic processes – and intensification of activities for sustainable development. In the analyzed period EP expenditure on average accounted for about 2.2% of EU GDP, whereas the ratio was subject to large variances within respective member states. Individual expenditure (per capita) was also highly differentiated. Here, a certain pattern can be identified – the more developed the country, the more funds it allocated to environmental protection.

It seems that, in the coming years, emphasis should be put on increasing the involvement of the private sector in environmental protection activities. Results of analyses indicate that the share of businesses in financing environmental protection was considerably lower than the share of the public sector and that of entities specializing in the production of environmental protection goods and services. Such a situation means that the 'polluter pays' principle is not implemented in full.

## References

- [1] Adewuyi, A.O. (2016). Effects of Public and Private Expenditures on Environmental Pollution: A Dynamic Heterogeneous Panel Data Analysis. *Renewable and Sustainable Energy Review*, 65, pp. 489–506.
- [2] Aysen, A.A. (2014). Environmental Protection Expenditure and Economic Growth: A Panel Data Analysis for the EU and Turkey. *British Journal of Economics, Finance and Management Sciences*, Vol. 9 (2), pp. 11-23.
- [3] Broniewicz, E. (2017). Comparison of Environmental Protection Costs and Revenues in Portugal and Poland. In Silva, E., Pais, C. and Pais, L.S. (eds.). *Teaching Crossroads: 12th IPB Erasmus Week*. Bragança: Instituto Politécnico de Bragança, pp. 47-58.
- [4] Broniewicz, E. (2007). Application of the Environmental Protection Expenditure Account. *Management of Environmental Quality: An International Journal*, Vol. 18, Issue: 3, pp. 298-308.
- [5] Broniewicz, E. and Domańska, W. (2016). Rachunki Wydatków na Ochronę Środowiska (EPEA) jako Moduł Europejskich Rachunków Ekonomicznych Środowiska (in Polish). *Optimum. Studia Ekonomiczne*, Nr 1(69), pp. 165-181.
- [6] Charles, H.C., Martin, F. and Dennis, M.P. (2012). Corporate Disclosure of Environmental Capital Expenditures: A Test of Alternative Theories. *Accounting, Auditing & Accountability Journal*, Vol. 25, Issue 3, pp. 486-507.
- [7] Commission Regulation (EC) (2003). Official Journal L 244 of 1 September. No 1667-1670.
- [8] Costanza, R. and Daly, H.E. (1992). Natural Capital and Sustainable Development. *Conservation Biology*, vol. 6, no. 1, pp.37–46.
- [9] Drastichová, M. (2016). Climate Change in the Sustainable Development Context with the Focus on the EU. In Kovářová, E., L. Melecký and M. Staníčková (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 149-160. ISBN 978-80-248-3911-0.
- [10] Ercolano, S. and Romano, O. (2017). Spending for the Environment: General Government Expenditure Trends in Europe. *Social Indicators Research*, 2017, pp. 1-25, DOI 10.1007/s11205-017-1695-0.
- [11] European Communities (2001). *Environmental Protection Expenditure in Accession Countries*. Luxembourg: Office for Official Publications of the European Communities.
- [12] Eurostat (1994). *SERIEE 1994 Version*. Luxembourg: Office for Official Publications of the European Communities.

- [13] Eurostat (2002). *SERIEE Environmental Protection Expenditure Accounts - Compilation Guide*. Luxembourg: Office for Official Publications of the European Communities.
- [14] Eurostat (2018). *Statistics* [online]. [cit.2018-02-10]. Available at: <http://ec.europa.eu/eurostat/data/database>.
- [15] Federal Statistical Office of Germany (2015). *Economy-wide Environmental Protection Expenditure Accounts for Germany*. Wiesbaden: Federal Statistical Office.
- [16] Haller, S.A. and Murphy, L. (2012). Corporate Expenditure on Environmental Protection. *Environmental and Resource Economics*, Volume 51, Issue 2, pp. 277-296. DOI 10.1007/s10640-011-9499-1.
- [17] Kasztelan, A. (2017). Green Growth, Green Economy and Sustainable Development – Terminological and Relational Discourse. *Prague Economic Papers*, 26(4), pp. 487–499. <https://doi.org/10.18267/j.pep.626>.
- [18] Kasztelan, A. (2016). Green Competitiveness of the EU Countries. In Kovářová, E., L. Melecký and M. Staničková (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 415-424. ISBN 978-80-248-3911-0.
- [19] Kasztelan, A. (2009). Implementation Problems of Pro-Ecological Activity in Food Industry Enterprises. *Zeszyty Problemowe Postępów Nauk Rolniczych*, Vol. 542, Issue 2, pp. 989-995.
- [20] Leiter, A.M., Parolini, A. and Winner, H. (2011). Environmental Regulation and Investment: Evidence from European Industry Data. *Ecological Economics*, 70, pp. 759–770.
- [21] Moe, S.H. and Braathu, T.H. (2014). *Government Expenditures on Environmental Protection and Resource Management*. Notater Documents 44. Oslo–Kongsvinger: Statistics Norway.
- [22] Olsson, N. and Johansson, U. (2005a). *Environmental Expenditure Statistics. Industry Data Collection Handbook*. Luxembourg: Eurostat.
- [23] Olsson, N. and Johansson, U. (2005b). *Environmental Protection Expenditure and Revenues Joint Questionnaire / SERIEE Environmental Protection Expenditure Account – Conversion Guidelines*. Luxembourg: OECD/Eurostat.
- [24] Rutkowska-Podołowska, M., Sulich, A. and Szczygieł, N. (2016), Green Jobs. In Kovářová, E., L. Melecký and M. Staničková (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 822-829. ISBN 978-80-248-3911-0.
- [25] Singh, N., Ma, J. and Yang, J. (2016). Optimizing Environmental Expenditures for Maximizing Economic Performance. *Management Decision*, Vol. 54, No. 10, pp. 2544-2561.
- [26] Wang, W.-K., Lu, W.-M. and Wang, S.-W. (2014). The Impact of Environmental Expenditures on Performance in the U.S. Chemical Industry. *Journal of Cleaner Production*, 64, pp. 447-456.

## European Integration – Challenges for the Banking System of Ukraine

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### **Abstract**

*The development of the integration processes in the world economy is connected with the production internationalization and, as a result, with the economic integration since the main objective of integration is to gain access to the effects which can be obtained within the system of a higher level. The aim of the article is to analyze the current changes in the banking system of Ukraine within the process of the European integration. The special attention is paid at the dynamics of the main indicators of the banking system of Ukraine functioning. The lists of the main foreign financial groups having their subsidiary banks in Ukraine as well as the most profitable and reliable banks were presented in the paper. The dynamics of the banks liquidation as well as the causes of such a reform step was given by the author. The main challenges the banking system of Ukraine is facing within the European integration process were identified in the paper.*

**Keywords:** banking system, banks performance, European integration, NBU

**JEL Classification:** E58, F15, G21

### **1. Introduction**

The development of the integration processes in the world economy is connected with the production internationalization and, as a result, with the economic integration since the main objective of integration is to gain access to the effects which can be obtained within the system of a higher level. More and more interconnections of economic processes of different levels and different systems are observed. Nowadays the key words are the interdependence of nations and the imperatives that a global system imposes on national economies (Gazzola et al., 2016). The sharp increase in the inter-firm and interstate competition for markets and sources of raw materials cause the need for cooperation of material and financial, as well as industrial efforts of territorially connected countries, allowing them to save on customs duties, to avoid additional expenses of production and circulation and to act as a united force against common competitors in the world market. The development of integration processes in the world economy is inextricably connected with the internationalization of production, and hence with economic integration.

The actual tendencies in the development of the world financial system, namely: globalization, internationalization, institutionalization, aggravation of the international competition, integration and computerization - contribute to the increase of the international banking services and open up wide opportunities for banks foreign economic activity. The European integration intentions of Ukraine have made changes to the development of its economy in

general and its financial sector in particular. These changes affected the development of the banking system, which is a system-building link between the financial and credit markets, especially substantially. The essence of the said changes is in the increase of the foreign banks presence on the national market, the necessity to implement the norms of the EU banking legislation as well as the European methods of banking business conduction into the domestic banking system practice. The conduction of the effective reforms in the banking sector of Ukraine will help accelerate the pace of its European integration, the establishment of closer international economic cooperation and increase the competitiveness of the Ukrainian banks on the global financial market as well as increase the ability to balance the interests of both banks and clients.

## **2. Problem Formulation and Methodology**

For over three decades, the deepening process of globalization and widening regionalization have been driving force in the development of various entities of the contemporary economy (Głodowska et al., 2016). Worldwide globalization and integration processes update the challenges of realizing the benefits and minimizing risks for the Ukrainian national economy from the establishment of a free trade zone with the European Union (NISS, 2017). As a rule, banking sector is a leader in reforming and implementing the best world and European banking practices. At the same time, the deepening of the economic and financial integration with the EU in the course of the aggravation of the financial and economic crisis in the euro zone countries creates certain challenges for the banking system of Ukraine. In this context, Ukraine faces a difficult task - to preserve the macroeconomic stability as well as to strengthen its banking system, continuing, at the same time, the implementation of the European integration strategy and ensuring the compliance of the obligations under the Free Trade Agreement.

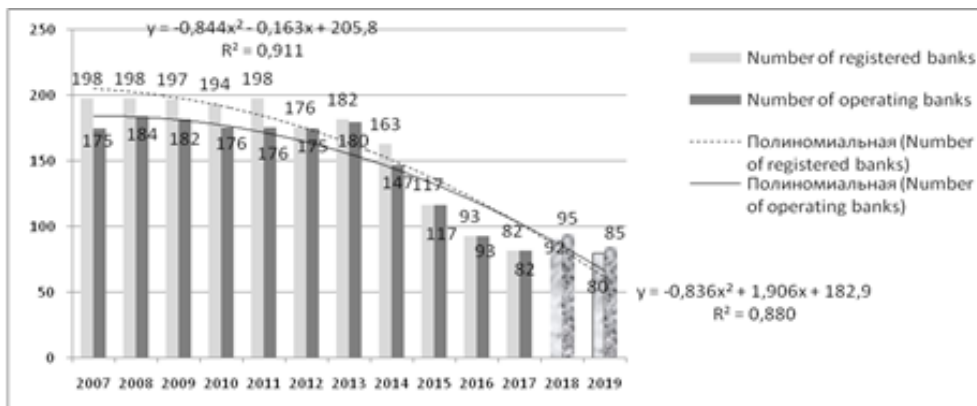
The aim of the article is to analyze the current changes in the banking system of Ukraine within the process of the European integration. The special attention is paid at the dynamics of the main indicators of the banking system of Ukraine functioning. The analysis included the dynamics of the number of registered and operating banks in Ukraine, the dynamics of the banks with foreign capital and their share in the total number of banks functioning on the territory of Ukraine, the dynamics of the banks with 100% foreign capital and their share in the total number of banks functioning on the territory of Ukraine as well as the dynamics of the number of banks in the stage of reorganization and liquidation. To more clearly present the analysis results, the graphic method was used by the author. To build the trend line and to make the prognosis of the said dynamics for two years, the polynomial approximation was used in the paper taking into consideration the highest value of the coefficient of determination  $R^2$  compared to that when using other functions. The analysis of the total assets and total liabilities of the Banks Functioning on the Territory of Ukraine was made using the tabular method as it is the main and one of the most effective methods of the synthesis results presentation as well as analytical data grouping. The method mentioned above was also used for presenting the results of the research concerning the main foreign financial groups having their subsidiary banks in Ukraine in 2017, the most reliable and the most profitable banks in Ukraine in 2017. The data for analysis were taken from the databases of the National Bank of Ukraine, the Ministry of Finance of Ukraine and the Association of Ukrainian Banks.

## **3. Problem Solution**

Ukraine has defined the course for integration into the European Union as the strategic goal of its foreign economic policy. Ukraine's participation in the European integration processes

determines the necessity for defining the directions and substantiation of adaptation principles of all the sectors of the Ukrainian economy activity to the requirements of the economic globalization. Because of everything mentioned above, the special attention should be paid to the financial and credit system of the country in general and its banking sector in particular. The strategic direction of Ukraine's financial policy is to ensure the stability of its banking system. The solution of this problem involves the improvement of the correspondent banking standards and regulations. Therefore, the goals and consequences of the European integration of the Ukrainian banking system should be in line with the said strategic priority. To continue the research, let's analyze the dynamics of the number of registered and operating banks in Ukraine with the help of Figure 1.

**Figure 1: The Dynamics of the Number of Registered and Operating Banks in Ukraine**



Source: author's own elaboration based on the data from the National Bank of Ukraine (NBU, 2018)

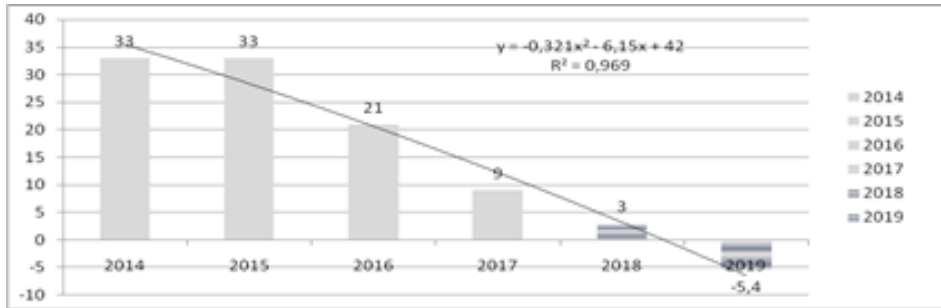
The data of the figure given above allow us affirm, that till the year 2015 the number of registered and operating banks didn't coincide, but due to the reforms in the banking sector of Ukraine, the number of the said banks became even. The prognosis made for the years 2018 and 2019 show us the possibility of increasing the number of operating banks in the country, but the trend line is still downward in the years under prognosis that is in accordance with the general trend present in the European banking system.

To continue the research, the dynamics of the number of banks in the stage of reorganization, banks recognized as solvent and those to which the Deposit Guarantee Fund introduced the interim administration as well as banks that are in the stage of liquidation, can be followed in Figure 2.

Most often, the bank liquidation process is started when the existing level of the bank capitalization does not allow it to repay its depositors. A large number of liquidated banks in Ukraine had the described situation because of the illiterate leadership or the fictitious role of the bank. Of course, not all the liquidated banks were created with dark goals and not all of them were closed for the same reason but, one way or another, the existence of a bank with problems is a threat not only to its depositors but to the entire banking system as well. Let's hope that in the future the liquidation of banks will soon be an exception rather than a norm. According to the prognosis for the years 2018 and 2019 shown in Figure 2, we may conclude that the year 2018 is critical in terms of the dynamics of the liquidated and

reorganized banks and either the National Bank of Ukraine will stop the process of banks liquidation or it should find another steps of the banking sector reforming.

**Figure 2: The Dynamics of the Number of Banks in the Stage of Reorganization and Liquidation**

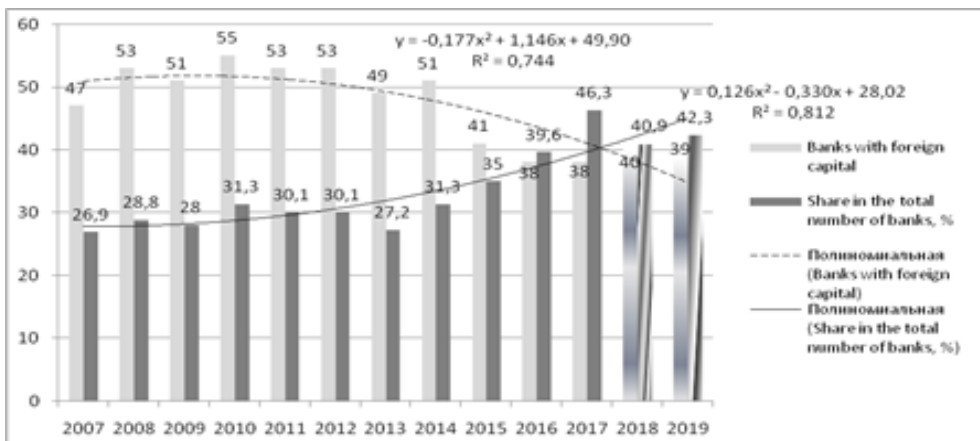


Source: author’s own elaboration based on the data from the National Bank of Ukraine (NBU, 2018)

But, in spite of that, we understand that the liquidation of banks is a necessary step to clean up and effectively operate the banking system in Ukraine. At the same time, a consistent and well-considered liquidation campaign guarantees all the depositors the timely repayment and minimization of the risks to the economy.

Nowadays, the Ukrainian market of banking services has a significant development potential and is therefore very attractive for foreign banks. At the same time, banks in the EU countries are focused on solving their problems with liquidity, that is through the financing cessation of the foreign affiliates and subsidiaries as well as fundswithdrawal from the less developed countries. To develop the statement expressed, let’s follow the dynamics of the number of banks with foreign capital and their share in the total number of banks functioning on the territory of Ukraine according to Figure 3.

**Figure 3: The Dynamics of the Number of Banks with Foreign Capital and their Share in the Total Number of Banks Functioning on the Territory of Ukraine**



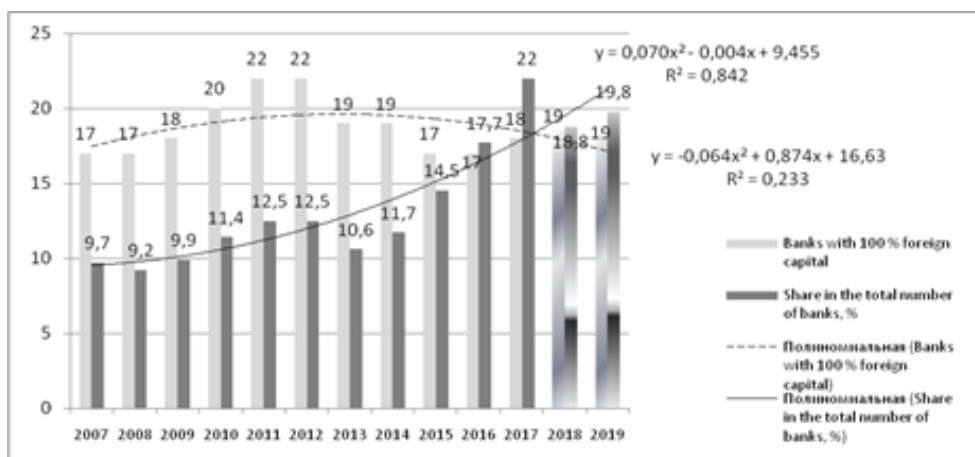
Source: author’s own elaboration based on the data from the Ministry of Finance of Ukraine (MFU, 2018)

According to the data shown in Figure 3, we don't see one clear tendency in the number of banks with foreign capital till the year 2014 – the dynamics of the said banks was once upward, once downward. But after the year 2014 there was a considerable drop in the number of the banks mentioned above, that is of ten units or 20 %. In the next year, the downward tendency didn't change showing the decrease in the number of the banks with foreign capital operating on the territory of Ukraine of three units or 7 %. In 2017 the number of the said banks didn't change. Such a downward tendency is not odd at all as it is in compliance with the general tendency in the banking sector of the most European countries. According to the prognosis made by us for the years 2018 and 2019, the number of the banks with foreign capital on the territory of Ukraine is to increase. Though, the trend line for the said years is still downward.

If we talk about the share of the banks with foreign capital in the total number of banks operation on the territory of Ukraine, we also don't see a clear tendency in the dynamics of the number of the said banks till the year 2014 just like with the general number of the banks with foreign capital. But we observe the opposite situation with the share of the banks with foreign capital in the total number of banks functioning on the territory of Ukraine after 2014, that is we see an increase in the said share till the year 2017 including. The prognosis for the year 2018 yet shows the drop in the share mentioned above with the next increase in the year 2019. Though the trend line for the years under prognosisis upward. As we see in the figure presented above, 2017 is the decisive year as it is when the downward trend line of the number of banks with foreign capital and the upward trend line of their share in the total number of banks functioning on the territory of Ukraine intersect.

The attraction of foreign capital into the banking system of Ukraine to increase the sufficiency level of its resource potential is very topical nowadays. The dynamics of the number of banks with 100% foreign capital and their share in the total number of banks functioning on the territory of Ukraine can be analyzed with the help of the data depicted in Figure 4.

**Figure 4: The Dynamics of the Number of Banks with 100% Foreign Capital and their Share in the Total Number of Banks Functioning on the Territory of Ukraine**



Source: author's own elaboration based on the data from the Ministry of Finance of Ukraine (MFU, 2018)

Analyzing the dynamics of the number of banks with 100% foreign capital functioning on the territory of Ukraine, we see a clear upward trend till the year 2012, after which there was a drop in the number of the said banks of three units or 14 %. We observe the next drop in the



number of the banks mentioned above in 2015, meaning of two units or 11% and the increase in the number of banks with 100% foreign capital in 2017, that is of one unit or 6% if compared to the previous year.

The prognosis for the years 2018 and 2019 shows us the next increase in the number of the said banks of another one unit or 6% but the trend line for the years under prognosis is still downward.

The dynamics of the share of banks with 100% foreign capital in the total number of banks functioning on the territory of Ukraine is very much like the one of the number of banks with 100% foreign capital with the exception in 2008, that is an upward trend till the year 2012 with the afterward drop in 2013. But after that, we see a clear upward tendency till 2017 including. But according to our prognosis, the drop in the share of the said banks in 2018 with the afterward increase of the share of the banks with 100% foreign capital are expected.

The presence of banks with foreign capital in Ukraine has a positive effect on the development of its financial system contributing to the attraction of the foreign investment and expanding the resource base for socio-economic development of the country. However, there exist quite serious financial and economic risks of a rapid increase in the share of the foreign bank capital connected with the possible loss of sovereignty in the area of a monetary and credit policy, the increase in instability, unexpected fluctuations of the banks liquidity, the speculative changes in the demand and supply on the money and credit market, as well as the possible outflow of financial resources from the country. That's why, the forms and extent of the expansion of the foreign bank capital presence on the banking market should be subordinated to the strategic objectives of the socio-economic development, the increase of the national competitiveness, the economic security and the strengthening of the monetary and credit system of Ukraine. The structure and dynamics of the total assets of the banks functioning on the territory of Ukraine can be analyzed with the help of the data presented in Table 1.

It is a matter of common knowledge, that the assets of a commercial bank are the direction of placement and use of the commercial bank resources. Bank assets are formed as a result of the bank's active operations, that is, the placement of its own and attracted funds in order to receive income, support liquidity and ensure the bank's successful functioning. The quality of a bank's assets is determined by their structure, the major part of which is taken by loans. The analysis of the structure of the banks operating on the territory of Ukraine gives us the following results – the share of the loans granted in the total assets of the banks operating on the territory of Ukraine lies in the range of 71 % in 2013 (the lowest value) and 82 % in 2017 (the highest value). The general ratio of 2017 to 2010 is 319672 mln UAH or 42.3 % in the upward direction, which is a positive indicator that testifies of the recovery of the Ukrainian economy in general and banking sector in particular. The share of the loans granted to the business entities in the total assets of the banks operating on the territory of Ukraine lies in the range of 54 % in 2010 and 2012 (the lowest value) to 69 % in 2017 (the highest value). The general ratio of the said kind of loans in 2017 to that of 2010 is 389172 mln UAH or 76.6 % in the upward direction. If we take a look at the share of the loans granted to individuals in the total assets of the banks operating on the territory of Ukraine, we'll see that it lies in the range of 8 % in 2014 (the lowest value) to 20 % in 2010 (the highest value). The general ratio of the said kind of loans in 2017 to that of 2010 is 10878 mln UAH or 5.8 % in the downward direction, that is a very disturbing result, because it points out that the banks operating on the territory of Ukraine prefer to give loans to business entities and to individuals.

The next item of our analysis is the liabilities of banks that is part of the balance sheet, which reflects in the monetary terms the source of a bank's funds. The liabilities of the bank consist of its own funds (capital) and liabilities (attracted resources).

**Table 1: Total Assets of the Banks Functioning on the Territory of Ukraine, mln UAH\***

Indicator	2010	2011	2012	2013	2014	2015	2016	2017	Ratio of 2017 to 2010, +,-
Total Assets	942088	1054280	1127192	1278095	1316852	1254385	1256299	1301560	359472
Total assets (unadjusted for reserves)	1090248	1211540	1267892	1408688	1520817	1571411	1737272	1856859	766611
Cash and Bank Metals	26749	27008	30346	36390	28337	34353	36512	42508	15759
Funds in the National Bank of Ukraine	26190	31310	33740	47222	27554	27392	40824	45498	19308
Correspondent accounts opened in other banks	67596	78395	99472	78106	99752	129612	121813	99337	31741
Securities	83559	87719	96340	138287	168928	201520	332273	431921	348362
Loans granted	755030	825320	815327	911402	1006358	1009768	1005923	1074702	319672
loans to business entities	508288	580907	609202	698777	802582	830632	847092	897460	389172
loans to individuals	186540	174650	161775	167773	179040	175711	157385	175662	-10878
Reserves for active operations of banks	148839	157907	141319	131252	204931	321303	484383	561037	412198

Source: author's own elaboration based on the data from the Ministry of Finance of Ukraine(MFU, 2018)

\*Exchange Rate of UAH (NBU, 2018)

Bank's capital is a source of its financial resources, has a legal basis and functional purpose, is a prerequisite for the formation and operation of any commercial bank and forms the basis for the formation of the bank's value. The structure and dynamics of the total liabilities of the banks functioning on the territory of Ukraine can be followed in Table 2.

The general dynamics of the banks' capital has the following tendency – it is upward till the year 2013 including, in which the said capital had the highest value during the time zone under analysis, that is 192599mln UAH. But after 2013 the tendency changed to the opposite one and continued one more year, that is 2015, in which we can see the lowest value of the banks' capital (103713mln UAH). In 2016 the tendency changed to the upward one and continued till the year 2017 including. The general ratio of the capital of the banks operating on the territory of Ukraine is 18781 mln UAH or 13.6 % in the upward direction, which is a good signal cause an adequate amount of the bank's capital contributes to its stable functioning and neutralization of risks as well as determines its place in the banking system.

The important constituents of a bank's liabilities are funds of business entities funds of individuals. The dynamics of the funds of business entities in the amount of the banks' liabilities is upward during the whole time zone under analysis.

**Table 2: Total Liabilities of the Banks Functioning on the Territory of Ukraine, mln UAH\***

Indicator	2010	2011	2012	2013	2014	2015	2016	2017	Ratio of 2017 to 2010, +,-
Total Liabilities	942088	1054280	1127192	1278095	1316852	1254385	1256299	1301560	359472
Capital	137725	155487	169320	192599	148023	103713	123784	156506	18781
statutory capital	145857	171865	175204	185239	180150	222170	414668	496541	350684
Liabilities of Banks	804363	898793	957872	1085496	1168829	1150672	1132515	1145054	340691
funds of business entities	144038	186213	202550	234948	261372	318568	369913	385005	240967
funds of individuals	270733	306205	364003	433726	416371	402137	437152	476965	206232
including term deposits of individuals	206630	237438	289129	350779	319121	294155	319551	328085	121455

Source: author's own elaboration based on the data from the Ministry of Finance of Ukraine(MFU, 2018)

\*Exchange Rate of UAH (NBU, 2018)

The general ratio of the said funds in 2017 to those in 2010 is 240967mln UAH or 167.3 % to the upward direction, that testifies to the preserved trust of the said entities to the banking system of Ukraine in general and to separate banks in particular. If we talk about the funds of individuals in the amount of the banks' liabilities, their dynamics differs from that of the funds of business entities, meaning – it is upward till the year 2013 included, followed by the downward one in the following two years, that is in 2014 and 2015. But in the year 2016 the dynamics of the funds of individuals changed to the upward one and remained so in 2017. The general ratio of the funds of individuals in the amount of the banks' liabilities in 2017 to those in 2010 is 206232mln UAH or 76 % to the upward direction. Taking into account the fact that the growth of the funds of individuals is mainly due to the predominance of the short – term deposits with a term up to one year, we don't see the reason to talk about the restoring of the individuals' trust to the banking system.

One of the criteria for assessing the level of a country's competitiveness is the indicator of its banks' reliability. The rating of the most reliable banks in Ukraine in 2017 can be followed in Table 3.

The rating presented in the table given above was compiled taking into account the ability of a bank to pay back the deposits in case of financial difficulties or problems related to the repayment of loans with the growth of its customers' debts. The level of the support of the state and shareholders was also taken into account. The rating was significantly influenced by the so-called the owner factor as the stability of a bank under the influence of stressful conditions is ensured by the timely replenishment of capital and liquid resources.

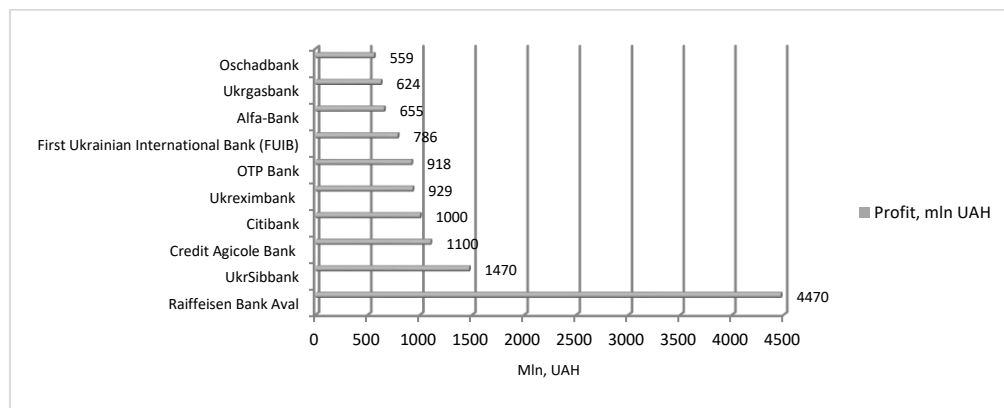
**Table 3: Rating of the Most Reliable Banks in Ukraine in 2017**

№	Bank	Owned by	Capital Origin Country
1	Raiffeisen Bank Aval	Raiffeisen Intl	Austria
2	Credit Agricole Bank	Credit Agricole	France
3	UkrSibbank	BNP Paribas	France
4	Oschadbank	Ukrainian State	Ukraine
5	Ukreximbank	Ukrainian State	Ukraine
6	KredoBank	PKO Bank Polski	Poland
7	Citibank	Citigroup	USA
8	ProCredit Bank	ProCreditGruppe	Germany
9	Ukrgasbank	Ukrainian State	Ukraine
10	Alfa-Bank	ABH Holdings S.A.	Luxemburg

Source: Forinsurer (2018)

The proof to the statement expressed in the latter sentence is the fact that the first three places in the said rating is taken by the banks with foreign capital, owned by the international financial groups from Austria and France. The Ukrainian State banks Oschadbank and Ukreximbank follow them taking respectively the fourth and the fifth places. The capital origin countries of the banks presented in Table 3 represent Europe, with the only exception – Citigroup (USA, America).

The mission of any bank is to provide high-quality banking services, impeccable service and an individual approach to each bank's client. On the other hand, the main objective of each bank as a business entity is to increase profits. Top – 10 of the most profitable banks in Ukraine in the first half of 2017 are presented in Figure 5.

**Figure 5: Top – 10 of the Most Profitable Banks in Ukraine in 2017, mln UAH\***

Source:Ukrinform(2018)

\*Exchange Rate of UAH (NBU, 2018)

As stated by the National Bank of Ukraine (Ukrinform, 2018), according to the results of 2017, the largest profits were recorded in Raiffeisen Bank Aval (4.47 bln UAH), UkrSibbank (1.47 bln UAH), Credit Agricole Bank (1.1 bln UAH), Citibank (1 bln UAH), Ukreximbank (929 mln UAH), OTP Bank (918 mln UAH), First Ukrainian International Bank (FUIB)(786 mln

UAH), Alfa-Bank (655 mln UAH), Ukrgasbank (624 mln UAH) and Oschadbank (559 mln UAH). Along with that, the largest losses were recorded in Privatbank (22.97 bln UAH), Prominvestbank (7.67 bln UAH) and VTB Bank (4.1 bln UAH).

Under the conditions of the international financial markets expansion, the effective activity of the national financial institutions depends on their ability to cooperate with similar, judging on their activity nature, international financial entities. More than that, the development of the financial and commodity markets requires additional capital attraction in the external financial markets and from the foreign financial institutions. The list of the main foreign financial groups having their subsidiary banks in Ukraine in 2017 can be followed in Table 4.

**Table 4: List of the Main Foreign Financial Groups Having their Subsidiary Banks in Ukraine in 2017**

№	International Banking Group	Capital Origin Country	Assets of International Banking Group, mln EUR	Subsidiary Bank in Ukraine
1	BNP Paribas	France	2077759	UkrSibbank
2	Citigroup	USA	1517922	Citibank
3	Credit Agricole	France	1762763	Credit Agricole Bank
4	Deutsche Bank	Germany	1708703	Deutsche Bank DBU
5	ING Group	the Netherlands	992856	ING Bank Ukraine
6	Intesa Sanpaolo	Italy	646427	Pravex Bank
7	PKO Bank Polski	Poland	58135	KredoBank
8	Raiffeisen Intl.	Austria	121624	Raiffeisen Bank Aval
9	SEB	Sweden	280847	SEB Corporate Bank
10	Unicredit	Italy	844217	Ukrsotsbank

Source: Association of Ukrainian Banks (2018)

Since 2006, more than a dozen of foreign financial groups have appeared in Ukraine. Since that time they have invested more than 10 blnUSD into the Ukrainian banking sector. There exist several motives for banks to enter foreign markets, these are managerial decisions, empire-building tendencies of banks, profitmaximization, the need to acquire new customers on new markets or to keep (and multiply) the relationship with existing customers on the new markets etc (Badulescu and Moruțan, 2016). Nowadays, the largest amount of the foreign assets is controlled by the investors from France, Austria, Germany, the Netherlands, Italy, Sweden, USA and Poland, that, in turn, testifies to the interest of the financial institutions from the European Union in the Ukrainian banking business controlling. What is interesting to point out here is, that till the year 2013 the share of the Russian Federation in the total assets of the banks operating on the territory of Ukraine had steadily increased, but due to the political power change and the events in the Eastern part of Ukraine, the situation changed to the opposite one and the Russian banks finished the year 2017 with big loses. So, we don't observe the domination of one single country on the Ukrainian banking services market. Such a diversification of banking assets owners can be considered a positive feature of the Ukrainian banking system, as it is less dependent on the economic and political conditions of the said single state.

Everything mentioned above as well as the analysis of the general economic development of Ukraine result in the defining of the following risks related to the European integration of the Ukrainian banking system:

- the increase of the competitiveness on the banking services market;
- the increase in the currency imbalances in the structure of the banks' assets and liabilities;
- the increase in the gap between the development level of the financial and real sectors of the economy, the imbalance between the aggregated demand and supply, and therefore the balance of payments;
- the unfavorable competition conditions because of the domination of banks with foreign capital in the most profitable segments of the Ukrainian banking services market;
- the implementation of such a credit policy by the banks with foreign capital that doesn't correspond to the national interests of the Ukrainian strategic development;
- the increase of the external dependence of the Ukrainian banking system on the instability in the international financial markets.

#### **4. Conclusion**

The actual tendencies in the development of the world financial system contribute to the increase of the international banking services and open up wide opportunities for banks foreign economic activity. The European integration intentions of Ukraine have made changes to the development of its economy in general and its financial sector in particular. These changes affected the development of its banking system as well. The conduction of the effective reforms in the banking sector of Ukraine will help accelerate the pace of its European integration, the establishment of closer international economic cooperation and increase the competitiveness of the Ukrainian banks on the global financial market as well as increase the ability to balance the interests of both banks and clients.

To draw the conclusions, it's necessary to note that not only the economic advantages, but also the shortcomings of the Ukrainian integration into Europe have not been thoroughly assessed and fully understood. The Association Agreement and the Free Trade Zone allow Europe to have Ukraine as a reliable partner and an outpost of the European integration without formal its membership but with a large-scale involvement into certain European integration mechanisms. The key idea of this process is Ukraine's convergence with the EU norms, standards and policies in all the directions, including its banking sector. Both Ukraine and the European Union would benefit from that. So, the integration of the Ukrainian banking sector into the European financial market, on the one hand, could lead to the activation of a number of risks of the financial and economic nature, and, on the other hand, could definitely have positive effects.

Thus, the main directions of the integration of the Ukrainian banking system into the European Union and the measures for their practical implementation should be the following ones:

- the assurance of the stability and increase of the competitiveness of the national banking system in the international banking services markets;
- the development of the mechanism for preventing and reducing risks which could be additionally introduced into the Ukrainian banking system because of the European integration process as well as the instruments for its implementation;
- the improvement of the Ukrainian banking system functioning in the context of Ukraine's integration into the European economic community;
- the continuation of the dialogue with the regulators of the banking activity from the EU countries.

Taking into account the risks and problems that exist in the EU banking system nowadays as well as the significant shortcomings of the banking regulation system, which were identified by the financial crisis, added by the constant changes in the regulatory environment of the EU, the European integration process should be approached in a very balanced and careful way.

## References

- [1] Association of Ukrainian Banks (2018) [online]. [cit. 2018-01-16] Available at: [http://aub.org.ua/index.php?option=com\\_content&task=view&id=12895&menu=119&Itemid=113](http://aub.org.ua/index.php?option=com_content&task=view&id=12895&menu=119&Itemid=113).
- [2] Badulescu D., Moruțan R. (2016) The Aftermath of the Crisis on Banking Systems of New EU Member States: Does the Entry Mode Matter? In International Conference on European Integration 2016. Ostrava: VŠB – Technical University of Ostrava, Faculty of Economics, Department of European Integration, pp. 46 - 56.
- [3] Daszkiewicz N. (2014) Internationalisation of Born Globals from the Theoretical Perspective. *Problemy Zarządzania*, vol. 13, nr 1 (51), t. 2: pp. 70 – 81.
- [4] Forinsurer. Rating Banks (2018) [online]. [cit. 2018-02-02] Available at: <https://forinsurer.com/rating-banks>.
- [5] Gazzola P., Sepashvili E., Lo Parco A. (2016) EU Integration for a Successful Eastern Partnership: Trade and Sustainability. In International Conference on European Integration 2016. Ostrava: VŠB – Technical University of Ostrava, Faculty of Economics, Department of European Integration, pp. 247 - 254.
- [6] Głodowska A., Pera B., Wach K. (2016) The International Environment and Its Influence on the Entrepreneurial Internationalization of Firms: The Case of Polish Businesses. *Problemy Zarządzania*, vol. 14, nr 3 (62), t. 2: pp. 107– 130.
- [7] Ministry of Finance of Ukraine. (2018) [Banks Performance Indicators online]. [cit. 2018-01-29] Available at: <https://index.minfin.com.ua/bank/stat/?2018-01>.
- [8] Ministry of Finance of Ukraine. (2018) Number of Banks in Ukraine [online]. [cit. 2018-01-28] Available at: <https://index.minfin.com.ua/bank/stat/count.php>.
- [9] Moroz S., Nagyova L., Bilan, Yu., Horska, E., Polakova, Z. The current state and prospects of trade relations between Ukraine and the European Union: the Visegrad vector. *Economic annals-XXI*. vol.163, issue 1-2 (1). pp.14-21.
- [10] National Bank of Ukraine (2018) [online]. [cit. 2018-01-27] Available at: [https://bank.gov.ua/control/uk/publish/article?art\\_id=34661442&cat\\_id=34798593](https://bank.gov.ua/control/uk/publish/article?art_id=34661442&cat_id=34798593).
- [11] National Bank of Ukraine. (2018) Exchange Rate [online]. [cit. 2018-02-20] Available at: [https://bank.gov.ua/files/Exchange\\_r.xls](https://bank.gov.ua/files/Exchange_r.xls).
- [12] National Bank of Ukraine. (2018) Reorganization and Liquidation of Banks [online]. [cit. 2018-02-10] Available at: [https://bank.gov.ua/control/uk/publish/article?art\\_id=75535](https://bank.gov.ua/control/uk/publish/article?art_id=75535).
- [13] National Institute for Strategic Studies (2017) [online]. [cit. 2018-02-05] Available at: <http://www.niss.gov.ua/articles/777/>.

- [14]Ukrinform (2018) [online]. [cit. 2018-02-08] Available at: <https://www.ukrinform.ua/rubric-economy/2399463-nbu-nazvav-najbils-zbitkovita-pributkovi-banki.html>.
- [15]Zatonatska, T. (2016) Global trends in state investment policy and practice of their implementation in Ukraine. *Economic annals-XXI*. vol.163, issue 1-2 (1). pp.26-30.



## Consumer in the European Union and Dual Food Quality

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### **Abstract**

*Free movement of safe and full-fledged food is a necessary characteristic of internal market; it contributes to health and well-being of citizens as well as to their social and economic interests. The problem with different food quality usually relates to the countries in the Eastern part of the EU. The consumers of those countries complain that quality of some products is lower in their country than quality of the same brands and the same producer is abroad. Studies provided in the food field and focusing on its quality really confirm that seemingly similar products are sold in the EU market differing by its content by individual country though; consumers are not able to defend themselves against such producers' acting. The article analyses the legislative regulations related to the food right and consumer protection in the EU and in the Czech Republic as it comes to food field, deals with dual food quality and considers the ways and possible solutions how to fight against it by current valid acts or new regulations.*

**Keywords:** consumer protection, deceptive acting, dual food quality, European single market, legal regulations

**JEL Classification:** A20, D18, K20

### **1. Introduction**

Discussions on dual quality are being held in irregular waves at least since 2011 when the Association of consumers in Slovak Republic published a partial comparison of the goods bought in the eight EU countries. It has emerged that some producers supply consumer goods with different ingredients but under the same sign or trademark.

Consumers complain that in some cases the goods is offered in better quality in the market of traditional EU countries contrary to other member countries. Also Czech consumers point out that the same product bought in the Western Europe is of different quality from the product bought in the Eastern Europe. Recently, media have repeatedly published the results of products comparison, which showed that in some cases the goods quality differs – sometimes in favour of consumers of the EU states, sometimes not. Different content of products or dual quality does not refer to the only goods of daily use but mainly to the food; by the research of Focus Agency provided in November 2015 for the Czech Agriculture and Food Inspection Authority (CAFIA), 88 % of Czech consumers are not satisfied with dual quality - (SZPI [online], 2016)

Dual quality means that the food being sold under the identical sign and packing has different content depending on the place where it is being sold. In different countries, the food differs in both aspects – content and ingredients quality. Thus, dual standard of food quality exists while in “the old EU countries” the quality is higher compared to “the new EU countries”.

Consumers expect the food to have the same content thus the same quality in the frame of the entire European Union. Because it is not true, they are being misled. The practice of dual food quality has to be considered unfair; the same trademark being put on less quality food and on better quality food at the same time is also unequivocally considered the unfair competition.

## 2. The Legislative Regulations of Food Quality

### 2.1 EU Legislation

The European Union has implemented many strict rules as it comes to consumer protection and by the article 169 of the Treaty on the Functioning of the European Union, the EU should contribute to an achievement of high level of consumer protection. At the beginning, the European Commission has reacted to indignation and findings of some member states referring to the dual quality by the conclusion that producers can change their products depending on market specifics and preferences of individual member states consumers. The only condition is truthful information on the packages.

At present time, the European Commission considers the problem of the food dual quality very significant. President of the European Commission, Jean-Claude Juncker, mentioned in his speech about the European Union status held on 13<sup>th</sup> September 2017: *“It is not acceptable to have the food of lower quality in some countries contrary to others. In the Union where all citizens are equal, it is not possible to consider some of consumers the second category. The European Commission has to provide with all means helping the national authorities to eradicate all illegal practices whenever they occur”*- (European Commission [online], 2017)

Because there are still big differences as for the food law among member states considering conception, rules and processes, which can avoid free movement of the food, the member states are adopting regulations involving the food. It is necessary though to determine common definitions, rules, requirements and processes to create a clear frame and common base for regulations at the level of the EU and individual member states regulating the provision with information about the food. Motlíček and Vavřina (2016) say that *“Business entities should consider opportunities of EU Food safety and quality policy, especially in the area of food production' quality towards enhancement of their competitiveness.”*

General aim of the food law is to provide consumers with awareness, which gives them an option to choose the food being consumed as well as to prevent them from any practices, which can be misleading. This aim is the part of the Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of the food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety.

Some aspects of providing consumers with information aiming to avoid misleading acting and lack of information are the part of Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market. This directive deals with commercial practices, which directly influence consumer's decision-making about trade transactions referring to products, protects economic interests of consumer against unfair practices and protects companies indirectly against competitors not following the rules of this directive. The aim of this directive is to make internal market to function properly and to achieve high level of consumer's protection by harmonization of legal and administration regulations of member states as it comes to unfair competition.

General rules involving unfair competition are added by special rules dealing with providing the consumers with food information. To guarantee a unified access to information being given to consumers about food, wide spectrum of legal regulations are implemented. Those regulations involve the rules of general and specific character as well as information about food, which contains the data given also by different means than labels do.

As it comes to providing the consumers with food information, the Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers is, in which among others is said that: *“The free movement of safe and wholesome food is an essential aspect of the internal market and contributes significantly to the health and well-being of citizens, and to their social and economic interests. In order to achieve a high level of health protection for consumers and to guarantee their right to information, it should be ensured that consumers are appropriately informed as regards the food they consume.”* (Regulation (EU) No 1169/2011)

Regulation (EU) No 1169/2011 determines general rules, requirements and duties in the field of information about food, mainly food labeling and means to guarantee consumers' rights to information and processes for provision with information, concretely with the aim to avoid misleading acting and misleading information omission. Petrescu-Mag and Petrescu, (2017) say that *„around 45% of tested people searched for the country of origin, 67.6% for producer's name and 47.5 % for special labels in at least half of the cases when they bought food“*.

Regulation (EU) No 1169/2011 also involves operators of food companies within all phases of food chain and all food determined to final consumer, nutritive information as well as it determines the rules as for the content and nutritional values on packed food.

Another important legislative regulation is the Regulation (EC) No 2006/2004 of the European Parliament and of the Council of 27 October 2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws. This regulation determines the conditions, under which particular authorities dealing with enforcement of consumer protection laws in member states will cooperate mutually as well as will cooperate with the Commission; it is based on the necessity to guarantee proper functioning of internal market and consumer protection. Such conditions are needed for particular authorities to be able freely and mutually cooperate when exchanging information, uncovering and investigating the illegal acting inside the EU. Therefore, it is proper to make this cooperation easier. Each body of public power is considered the particular authority mentioned in this regulation, which has been established at the state, regional or local level and is especially authorized to enforce the act on consumer protection and which has to be determined by each member state.

## **2.2 Legislation in the Czech Republic**

The Czech food legislation involves many acts and sub-legal regulation. Harmonization of the Czech law with EU regulations has been a big developing step, which refers to many fundamental regulations. European food law involves tens of obligatory regulations dealing with conditions for the production and manufacturing of food while some of them are determined in regulations, which have direct effect in the EU member states. Thus, it is very difficult set of regulations, which is partially transposed to the national legislation of each member state and partially is of direct effect once it is published in Official Journal of the EU.

As far as consumer protection is concern, the most important act is probably the Act No. 110/1997 Coll., on food and tobacco products, the purpose of which is to implement particular EU regulations and adjust the duties of operators of food company, producers, suppliers, retailers and distributors in connection with directly used EU regulations.

The act and implementing regulations issued by the Ministry of Agriculture and Ministry of Health determine wide spectrum of obligations for food company operators such as serious requirements for harmlessness, quality, goods or ingredients circulation, technological demands, hygienic conditions etc.

Many requirements refer to food circulation. Food, which is harmless, deceptively labeled or offered to be consumed in misleading way, food of unknown origin and with expired date of use is banned to be given for circulation.

Another important act referring to food, the Act No. 258/2000 Coll. is on public health protection, which adjusts the rights and duties of natural person and legal entities in the field of protection and support of public health and the set of bodies of public health protection, their scope of authority and sphere of activity.

As far as “non-food” regulations are concern but connected to consumer protection, dual quality and misleading acting, mainly the Act No. 634/1992 Coll. on consumer protection and the Act No. 89/2012 Coll. Civil Code are. Both acts involve among others misleading trade practices and unfair competition.

General requirements for product labeling are mentioned in the Act on consumer protection. In §10 of the Act on consumer protection, it is said: *„The seller has to guarantee that products sold by him are visibly and understandably labeled by producer, supplier or importer’s name. If the form of selling requires it, also by data about weight, volume or size or other data needed for the product to be identified or used”*. (Act No. 634/1992 Coll).

Concrete request for food labeling can be found in the act on food in § 7 where it is said that: *„Operator of food company is obligated to guarantee that there is the following information on the food package determined for the consumers or boarding facilities (based on conditions determined by directly used regulation of the EU on food labeling): name and surname or trade company and business address of company producing particular food, food name, net value, ingredients list, country of origin, storage way in case such food is concern, bad storage of which could be danger or quality determined by legal regulation or declared by the producer, could get worse, use-by date etc.”*. (Act No. 110/1997 Coll.).

The list of obligation of food company operator is then added by the links to art. 10 and art. 44 of the Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers.

### **3. Dual Food Quality**

Each of us is being interested in the safe and quality food. Food is indisputably the field, in which consumers search for information the most. Although there is no list of all regulations, directives, acts and rules mentioned in this article, it is clear that for producer or other operator of food company, an orientation in all issues can become very difficult so is for consumers. Although subjects producing and placing their food product in the EU single market are bounded by all kinds of legislation and norms, such cases occur recently when those are not followed in 100 %. In some European markets, such food occurs, which by its quality does not refer to information being declared on its packages or labels.

Internet, media or different professional forums show information being disquieting for many consumers. The research provided by the Ministry of Agriculture of the Czech Republic in the beginning of 2017 proved that in Czech shops such food is being sold not being of the same content as in Germany or Austria although it has the same name and package. The test results

of the University of Chemistry and Technology in Prague, which provided this research showed that food not only differs by quality but ingredients as well. Former minister of the Ministry of Agriculture of the Czech Republic, Marian Jurečka said at the Žofínské fórum on 3<sup>rd</sup> October 2017 that there were 21 products tested. It was found out that Tulip Luncheon meat from Germany contains pork while in the version for the Czechs there is poultry separates; fish fingers Iglo being sold in the Czech Republic have by 13 % less meat contrary to those in Germany and big difference was also found in frozen sausage pizza. The test also uncovered that e.g. ketchups contain different amount of tomatoes and pineapple slices are canned in own juice in Germany and Austria while those for the CR, Slovakia and Hungary are canned in sugar syrup.

Dual food quality has been also monitoring by the magazine dTest for long time; this magazine deals with comparison of products' quality in the market. This magazine provided the test of food of several countries in 2016 and came to similar conclusions as the Ministry of Agriculture.

In this connection, several questions occur:

**a) In case of dual quality, does consumer protection exist and is the Czech food market sufficiently supervised?**

The offer in the market is wide and each consumer can choose such product fitting his taste, habit and financial possibility. Approach and realization of food control in the Czech Republic is based on the legal regulations mainly the Act No. 110/1997 Coll. on food and tobacco products, the Act No. 146/2002 Coll. on the Czech Agriculture and Food Inspection Authority (CAFIA) or the Act. No. 255/2012 Coll. on the control and they refer to the food control principles exercised in the EU member states. The website of CAFIA states in the section "Consumers' questions": *„CAFIA controls in the frame of its competences given by the law whether food is produced, warehoused, transported and sold in accordance with legal regulations conditions, whether is safe and whether it suits the quality requests if given by the law. So, if the quality parameters are given for some food, producer has to follow those. CAFIA as the state controlling authority cannot demand a fulfilment of quality indicators above the frame of the legal regulations. In other words, CAFIA has no legal authority to compare food content with the same trade name of different EU countries neither is authorized to punish operators in case those would sell the products with different content in the Czech Republic contrary to the other EU member states if those products follow valid legal regulations dealing with the safety, hygiene and quality”.* (SZPI [online], 2016)

When buying food, consumers can be recommended to watch the content of the products – what the particular product contains, in what amount and based on this information they can make decision whether particular product will be bought or not. It is true though that so called substitute food can be bought in the market, too. For example, milk products alternatives. Those are such products in which milk part was partially or fully replaced by another one, the most often by vegetable fat. As for meat products, e.g. small sausage (špekáček) produced in the CR has to contain min 40 % of meat. If there are quality parameters determined for some food, producer has to follow those and in case those products are save and are not labeled in breach of the law, CAFIA cannot punish the sale of them.

**b) Why dual food quality?**

While current European regulations and directives adjust mainly food safety, the product content is regulated at different levels. As said above, milk and meat products' content is under the only national legislation of individual states. The products' content is mainly on the producers' side. Dual quality is the fact. On the other hand, the statement that the difference

in ingredients, quality and amount is labeled on the product so thus this labeling is in accordance with the EU rules cannot be agreed with. Dual food quality is misleading practice because it omits to declare serious information, which is needed by average consumer to make decision on trade transaction. Such specification is considered the serious information saying that particular food is of lower quality contrary to this expected by the customer because of the same labeling. Average customer thus makes decision he would not make knowing the true.

As it comes to problem solution, it could be the implementation of products specific labeling into the EU law, based on which consumer would be able to recognize the product characteristics at first sight without the need to investigate e.g. product content. Correction could become real just by food because this is usually very delicate topic and there is much more probability to implement such solution. Grunert and Aachmann (2016) also mention that „*The EU promotes three types of food quality labels, PDO, PGI and TSG in order to protect producers of food with special qualities and to aid consumers in their decision-making.*“

Another possible solution at the EU level as well as in national legislations, voluntary products labeling by the producers could be. Effectiveness of such labeling becomes questionable though as well as interests of producers in such option.

### **c) Dual quality or price versus quality?**

In the countries of the Middle and Eastern Europe where a purchase power of inhabitants is lower contrary to the Western Europe countries, market sensitivity to the price is significantly higher. More quality food is usually more expensive. Therefore, in the frame of competition, producers supply food of different quality to the markets of the Middle and Eastern Europe, which, in most cases, are of lower quality, lower producing costs and thus of lower selling price.

Producers mask this fact saying that customers of the Middle and Eastern Europe have different taste preferences so the products have to be adjusted to those. When looking closer though, it is often discovered that different taste is caused just by lack of the most costly ingredient. This fact can be demonstrated on e.g. lower share of meat in the meat products determined for the markets of the Middle and Eastern Europe or different share of sugar and artificial sweeteners in the beverages of different markets etc.

Price consequences of higher products quality have to be solved by producers themselves in the frame of the costs. Such premise has to be applied that the same product in the different markets does not have to be of the same price but has to be of the same quality. And, it is the task of state institutions, consumers' associations and last but not least consumers themselves to put pressure on the producers and sellers to have the products of the same quality in all markets.

## **4. Quality Food in All EU Member States**

The EU legal regulations for food field involve the list of the most important information, which has to be stated on the product package. This information and norms dealing with food safety have to be uncompromisingly followed. Food industry cannot resort to misleading or unfair practices being forbidden by the EU regulations on unfair competition.

In October 2017, the Commission issued the instructions, which could help the member states when fighting unfair competition. Those instructions can help the national authorities to decide whether the company offering dual quality products in different countries violates the EU legal regulations. The instructions involve and explain the demands of the EU legal regulations as

it comes to food and consumer protection, which have to be exercised when evaluating particular problem with dual food quality. Those are as follows:

- *regulation on the provision of food information to consumers*, which requests consumers to have sufficient and true information about particular product. For example, the label has to contain all ingredients the particular product contains;
- *directive concerning unfair business-to-consumer commercial practices in the internal market* forbidding unfair competition such as introducing identical brand products to the market in the way, which misleads consumers.

Based on those legal regulations, the instructions determine such process, based on which national authorities dealing with consumer protection and authorities responsible for food control find out whether producers violate given law or not. In case the violation of the law is of cross-border character, authorities of consumer protection can solve this issue at the European level in the frame of the net for cooperation in consumer protection area.

Except those instructions, the European Commission will work on the methodology leading to improvement of comparing food tests in order to make the member states to be able to issue this question based on reliable and shared scientific knowledge, which will be obligatory for all. To elaborate this methodology, the Commission provides the Joint Research Centre with 1 million EUR. Further, the Commission will also finance another activity focused on a collection of evidence and rules exercise – thus studies or coercive measures.

Harmonization of the rules makes consumers' and companies' certainty higher. Consumers and businesses will be able to rely on unified legal frame based on clearly determined legal terms issuing all aspects of unfair competition in the entire European Union. The result of such activities, the remove of barriers resulting from fragmentation of regulations on unfair competition damaging economic interests of consumers will be; and, achievement of unified conditions in internal market.

## 5. Conclusion

Food safety and consumers interests' protection is the subject of increasing interest of wide public, non-governmental organizations, professional associations, international business partners and trade organizations. The trust of consumers and trade partners is necessary to be guaranteed by open preparation of the food law and by the fact that public power bodies would adopt the suitable measures aiming to inform the public in case the sufficient reasons for suspicion that some food can represent the risk occur.

The legal regulations on the provision of food information should forbid the use of such information, which would mislead the consumers. Mainly when food characteristics and its effects is concern. Experience shows that in many cases voluntary information about food is stated at the expense of obligatory one. Therefore, it is necessary to determine such criteria, which would provide with the balance between provision of obligatory and voluntary information.

The provision of food information should lead to high level of health protection as well as consumers' interests because the consumer will be able to make informed choice of food and its safe use with regard to health, economic, environmental, social and ethical aspects.

## References

- [1] Act No. 110/1997 Coll. on food and tobacco products as amended.
- [2] Act No. 146/2002 Coll. on Czech Agriculture and Food Inspection Authority as amended.
- [3] Act No. 255/2012 Coll. on control
- [4] Act No. 258/2000 Coll. on public health protection as amended.
- [5] Act No. 634/1992 Coll. on consumer protection.
- [6] Act No. 89/2012 Coll. Civil Code.
- [7] Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market. Available at: <http://eur-lex.europa.eu>
- [8] European Commission. (2017). *Dual quality of products*. [online] [cit.2017-09-13]. Available at: [https://ec.europa.eu/commission/sites/beta-political/files/dual-food\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/dual-food_en.pdf)
- [9] Grunert, K. G. and Aachmann, K. (2016) Consumer reactions to the use of EU quality labels on food products: A review of the literature. *Food Control*, vol. 59, pp. 178-187.
- [10] Jurečka, M. (2017) *Žofínské fórum: Kvalitní potraviny pro české záklazníky. Otazníky přetrvávají*. [online] [cit.2017-10-03]. Available at: <http://www.zofin.cz/cs/zofinska-fora/archiv/214-zofinske-forum/>
- [11] Motlicek, Z. and Vavrina, J. (2016) EU Food Safety nad Quality Policy in the Context of Sustainable Competitiveness of Food Processors Settled in the Czech Republic. In *6th International Conference on Management (ICoM) - Trends of Management in the Contemporary Society Location*, Brno, pp.32-36.
- [12] Petrescu-Mag, R. M. and Petrescu, D. C. (2017) Product policy – food quality labeling as food patriotism. Insights on consumer label reading behavior. *Quality-Access to Success*, vol. 18, pp 327-333.
- [13] Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety. Available at: <http://eur-lex.europa.eu>
- [14] Regulation (EC) No 2006/2004 of the European Parliament and of the Council of 27 October 2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws (the Regulation on consumer protection cooperation). Available at: <http://eur-lex.europa.eu>
- [15] Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers. Available at: <http://eur-lex.europa.eu>
- [16] SZPI (2016). *Výzkum: český spotřebitel žádá stejně kvalitní potraviny jako evropský*. [online] [cit.2016-02-18]. Available at: <http://www.szpi.gov.cz/clanek/tz-2016-vyzkum-cesky-spotrebitel-zada-stejne-kvalitni-potraviny-jako-evropsky.aspx>
- [17] The Treaty on the Functioning of the European Union. Available at: <http://eur-lex.europa.eu>



## European Air Integration

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### **Abstract**

*This article is giving an overview about the European Commission 's "Single European Sky" initiative. As a response to the dramatic growth in air travel witnessed in the last two decades, the European Commission passed two Single European Sky (SES) packages to create a legislative framework for European aviation. In order to ensure that the Single European Sky is an airspace without frontiers, the European Commission proposes in the regulation on the organisation and management of airspace to set up a unique flight information region by merging all the national regions into a single portion of airspace within which air traffic services will be provided according to the same rules and procedures. The aim is to reduce environmental pressures, and fares, since airlines' extra costs for operating within such a fragmented market are enormous. This would increase efficiency and cut costs.*

**Keywords:** *air traffic management, European air integration, functional airspace block, Single European Sky*

**JEL Classification:** *K23, K33*

### **1. Introduction**

After the first decade of the 21st century we are on the threshold of a new global order. One of the most dominant trends involved is globalization, which is a spontaneous and uncontrolled process (Czegledy, 2012, p. 38; Hauer, 2016, p. 321). The globalization of economic governance reflects the contradictory interaction of innovative communication elements of the productive forces of the information society and the need to regulate the use of dwindling traditional resources (Eletsky, 2016, p. 198). Aviation contributes much to our culture and our global economy. It shrinks the planet and integrates people of vastly different backgrounds (Klenka, 2017, p. 127). Europe needs strong transport connections to drive trade and economic growth, and to create employment and prosperity. Transport networks are at the heart of the supply chain and are the foundation of any country's economy. They allow goods to be distributed efficiently and people to travel. They make places accessible, bring and bind us together and allow us a high quality of life. Transport is a cornerstone of the European integration process and is firmly linked to the creation and completion of the internal market, which promotes jobs and economic growth. As one of the first common policy areas of today's European Union (EU), it was seen as vital for fulfilling three of the four freedoms of a common market as established in the Treaty of Rome in 1957: the free movement of individuals, services and goods. Without smooth transport connections and networks, there would be no such movement. Therefore, EU transport policy has always focused on overcoming obstacles between Member States and creating a single European transport area with fair competition conditions for and between the different forms of transport: road, rail, air and waterborne (European Commission [online], 2014).

As well as being a key sector of the economy, transport is a major contributor to the economy (4.8% – or €548bn – in gross value added overall for the 28 EU countries) and sustains over 11 million jobs in Europe. The European Commission (Commission) aims to develop and promote transport policies that are efficient, safe, secure and sustainable, to create the conditions for a competitive industry that generates jobs and prosperity (European Union [online], 2014). A strategically important sector that makes a vital contribution to the EU's overall economy and employment, aviation supports 5.1 million jobs, directly and indirectly, and contributes €365 billion, or 2.4 %, to European GDP (European Commission [online], 2014).

## **2. Problem Formulation and Methodology**

Airport together with air traffic management (ATM) services providers constitutes the key elements of the infrastructure of civil aviation. The quality, efficiency and cost of these services have become increasingly important to the competitiveness of the industry. In Europe, airports and air traffic management can safely handle up to 33 000 flights per day. Yet, Europe as a whole is inefficiently managed and unnecessarily fragmented, and a slow implementation of the Single European Sky (SES) framework means higher costs for the airlines, which directly affects their competitiveness. The estimated costs of the EU's fragmented airspace represent at least €5 billion a year. Such an inefficient use of the airspace causes higher prices and delays for passengers, increasing fuel burn and CO<sub>2</sub> emissions for operators, and impedes our efforts to improve environmental performance (European Commission [online], 2015). How will the European airspace accommodate the increasing air traffic flows, whilst cutting costs and improving its performance?

This article is developed using theoretical methods such as abstraction, analysis and subsequent synthesis, and deduction. In the early stages of research, we focus on the analysis of normative sources of law and the current state of the legal framework concerning airspace in the EU. General scientific methods will be used, especially methods of analytical synthesis, exemplification, systematic analysis and legal methods.

## **3. Single European Sky (SES)**

Since 2004, the EU has gained competences in ATM and the decision-making process has moved away from an intergovernmental practice to the EU framework. The EU's main objective is to reform ATM in Europe in order to cope with sustained air traffic growth and operations under the safest, most cost and flight efficient and environmentally friendly conditions. The answer came with the initiative of organising airspace into functional blocks, according to traffic flows rather than to national borders (EUROCONTROL [online], 2018a). This implies de-fragmenting the European airspace, reducing delays, increasing safety standards and flight efficiency to reduce the aviation environmental footprint, and reducing costs related to service provision. Achievements have already been made at operational, technological and institutional levels; efforts are ongoing to maximise the benefits of activities initiated under the SES framework. Such a project was not possible without common rules and procedures at European level (European Commission [online], 2018a). The technology required for the future single sky is provided through the Single European Sky ATM Research (SESAR) Programme, which aims to modernise infrastructure and raise efficiency by optimising capacity – and so enable the SES to become a reality. A second package of measures, known as the single European sky II (SES II), followed in 2009 and focused on the environment and cost efficiency. The aim is to modernise Europe's air traffic control system,

implement the single European sky and complete the European common aviation area. However, Europe is still far from meeting its single European sky ambitions and more efforts are needed to make sure that the benefits of a genuinely integrated operating airspace are delivered as soon as possible (European Commission [online], 2014).

### ***3.1 The Creation of the Single European Sky***

Launched by the European Commission in 1999, its primary aim was to meet future capacity and safety needs through legislation. This Communication aims to optimise air traffic management and satisfy all airspace users, whether civil or military, airspace being a common asset which should be managed collectively regardless of national borders. The Commission considered that urgent measures are still required to bring air traffic management into line with principle of the smooth operation of the internal market and ensure the creation of a SES. Airspace congestion is one of the most obvious signs that such action is needed. The delays on many European flights are frequently due to saturated airspace and infrastructure. Measures must be taken to deal with congestion and prevent crisis situations for all users. In this context, the Commission considered that the creation of a SES requires not only joint technical and operational measures, but the collective management of airspace, which should permit a substantial reorganisation of its structures and organisation. The reorganisation will be based on specific measures:

1. sectors being subdivided, and routes established regardless of national borders. This will permit the airspace to be used more efficiently;
2. the division of airspace between civil and military users taking account of the new geopolitical realities and forming part of a consistent and efficient framework.

In making its proposals, the Commission is aware that each action and change depends on the collaboration of all the actors concerned. In particular, EUROCONTROL should continue to play a vital role in realising the measures, in view of the experience it has acquired. In order to avoid any obstacles which may present themselves in the course of implementing its proposals, the Commission has set up two specific working frameworks:

1. dialogue will be opened with the two sides of industry, as they will be using and operating the single sky;
2. a high-level group will be set up under the chairmanship of the Member of the Commission responsible for transport. The group will bring together those responsible for air traffic management in the Member States and will take account of the proposals for action contained in the Annexes to the Communication. The actions include: evaluating the performance of the European air traffic management system, developing the capacity of aeronautical infrastructure, planning capacity, developing incentives, carrying out research and technological development, and standardising systems (Eur-lex.europa.eu [online], 2007).

### ***3.2 Framework for creation of the Single European Sky***

The SES means a package of measures to meet future capacity and air safety needs. It applies to both the civil and military sectors and covers the regulatory, economic, safety, environmental, technological and institutional aspects of aviation. The Regulation (EC) N° 549/2004 forms part of a package of legislation on air traffic management designed to create a SES by 31 December 2004. The objective of the SES is to ensure an optimum use of European airspace to meet the requirements of all airspace users. The SES package consists of

this framework regulation plus three technical regulations on the provision of air navigation services (N° 550/2004), organisation and use of the airspace (N° 551/2004) and the interoperability of the European air traffic management network (N° 552/2004). These regulations are designed, in particular, to improve and reinforce safety and to restructure the airspace on the basis of traffic instead of national frontiers, cover the provision of air navigation services (ANS), the organisation and use of airspace and the interoperability of the European Air Traffic Management Network (EATMN) (European Commission [online], 2018a). The objective of this regulation is to enhance current safety standards and overall efficiency for general air traffic in Europe, to optimise capacity meeting the requirements of all airspace users and to minimise delays (European Commission [online], 2014a).

The Regulation (EC) N° 550/2004 establishes requirements for the safe and efficient provision of air navigation services for general air traffic in the EU as part of the SES initiative. The regulation outlines the air navigation service provider certification procedures to be adopted by the supervisory authorities of EU countries. Certificates, valid in all EU countries, specify the rights and obligations of air navigation service providers. This includes access to services for airspace users (operators of aircraft used for general air traffic) without discrimination, and regarding safety, and the possibility of offering services to other providers, airspace users and airports within the EU. National supervisory authorities in EU countries are each responsible for designating a certificate-holder to provide exclusive air traffic services. They also ensure compliance for blocks of airspace under their control. This takes place jointly (or by agreement) if a block extends over more than one country, or if a certificate holder operates in more than one country. If a provider does not meet the requirements, the authorities concerned can take action, including revoking the certificate. The authorities then become responsible for assuring continuity of service (European Commission [online], 2015).

The Regulation (EC) N° 551/2004 objective will help to optimise the use of European airspace, reducing delays and promoting the growth of air transport. The creation of the Single European Sky seeks to:

1. increase air traffic control capacity;
2. improve safety;
3. reduce the fragmentation of air traffic control;
4. improve the integration of military systems into the organisation of air traffic control;
5. facilitate the introduction of new technology.

The ultimate objective is to enable Europeans to make journeys in a SES without frontiers, while maintaining the highest levels of air safety (European Commission [online], 2014b).

The Regulation (EC) N° 552/2004 objective will enable optimum use to be made of European airspace, which will help to reduce delays and boost growth in air transport. The aim of this regulation is to define common requirements to guarantee interoperability between the various air traffic management systems used. It establishes a harmonised system of certification for components and systems. The aim of the regulation is two-fold:

1. to achieve interoperability between the different systems, constituents and associated procedures in the European air traffic management network;
2. to ensure the introduction of new agreed and validated concepts of operations and technology in air traffic management.
  1. The implementing rules for interoperability must in particular:
    1. determine any specific requirements, in particular in terms of safety;
    2. describe, where appropriate, any specific requirements, in particular regarding the coordinated introduction of new concepts of operation;

3. describe the specific conformity assessment procedures involving notified bodies to be used to assess the conformity or suitability for use of constituents, as well as for the verification of systems;
4. specify the conditions of implementation including, where appropriate, the date by which all relevant stakeholders are required to comply with them (European Commission [online], 2014c).

On the technology side, SES is supported by the SESAR Programme, which will provide advanced technologies and procedures with a view to modernising and optimising the future European ATM network (EUROCONTROL [online], 2018a). The SES framework has been supplemented by an integrated approach towards safety by the extension of the competencies of the European Aviation Safety Agency (EASA) in the field of aerodromes, air traffic management and air navigation services, through the establishment of a Joint Undertaking (JU) on research & development, the SESAR and of a SESAR Deployment Manager. A Network Manager for the European ATM network has been created, while an independent Performance Review Body (PRB) supports the Commission in the development and management of the SES performance scheme in which Functional Airspace Blocks (FABs) have a key role to play (European Commission [online], 2018a).

The overall SES objectives will be achieved through a holistic approach that encompasses five interrelated pillars:

1. the performance pillar, comprising the Performance Scheme, the Functional Airspace Blocks, the charging regulation, the network manager;
2. the safety pillar aiming to achieve the highest safety standards through a total system approach. For this purpose, the competences of EASA have been extended to ATM and aerodromes. The early involvement of EASA in SJU's activities will facilitate transition towards deployment;
3. the technology pillar, which is the SESAR Programme that will provide the new generation of ATM technologies and procedures developed and validated by the SJU and that are compliant with SES objectives and requirements (SES technologies & procedures);
4. the human factor pillar, which places the human operators as a central element for implementing the changes to the new system and for building a genuine safety culture. The staff operating the ATM network will ultimately implement the legislative and technological aspects of the SES and, therefore, effectively manage the change brought by SES and SESAR;
5. the airport pillar ensures that SES covers all segments of flight from departure to arrival gates („gate to gate“ approach). Airports are an integral part of the ATM infrastructure and constitute critical nodes for the network's efficiency. They will benefit from SES technologies and procedures, contribute to their synchronized deployment and the optimisation of airport infrastructure (European Commission [online], 2010).

#### **4. Single European Sky II**

The four Regulations adopted in 2004 (the SES I Package) were revised and extended in 2009 with Regulation (EC) N° 1070/2009 aimed at increasing the overall performance of the air traffic management system in Europe (the SES II Package). On this basis, the Commission adopted and implemented extensive and comprehensive implementing legislation; this framework also includes more than 20 Implementing Rules and Community Specifications adopted by the Commission in view of ensuring the interoperability of technologies and

systems. Major developments have been possible due to the extensive involvement of stakeholders from the ATM community: industry partners, air navigation service providers (ANSPs), national supervisory authorities (NSAs), social dialogue with staff unions, airport authorities, the military and the certification authorities, and enhanced cooperation with EUROCONTROL (European Commission [online], 2018a).

With the SES II package, a step forward was made towards establishing targets in key areas of safety, network capacity, effectiveness and environmental impact (EUROCONTROL [online], 2018a). Its ultimate objective is to increase the economic, financial and environmental performance of the provisions of the ANS in Europe. In particular, the amendments to the SES I regulatory package introduced a comprehensive EU-wide Performance Scheme; a refocus of the Functional Airspace Blocks to be not just about airspace but service provision in general, and a Network Manager, that is a centralised function at EU level to carry out the management of the ATM network functions (airspace design, flow management) and management of scarce resources (transponder code allocations, radio frequencies). The SES drove the transformation of the role of EUROCONTROL, as defined in Commission Regulation (EU) N° 677/2011, the function of Network Manager has been entrusted to EUROCONTROL up to 2019. Furthermore, it extended the competences of EASA to air traffic management and thus shifted rulemaking support for technical implementing rules, as well as oversight of Member States, from EUROCONTROL to EASA (European Commission [online], 2018b).

## **5. Functional Airspace Block (FAB)**

Although airspace is a common resource, ATM in the EU is still largely organised in a fragmented way, mostly according to national boundaries. Every time a plane enters the airspace of a Member State, it is serviced by a different ANSP because of different rules and operational requirements. Each service provider procures tailored equipment and most maintain their own training schools and all other support functions. This fragmentation impacts on safety, limits capacity, and above all, adds to cost. The key to improved capacity and efficiency, enhanced safety and lower costs for air navigation services, is through enhanced cooperation and integration across borders (European Commission [online], 2018c).

The establishment of functional airspace blocks was aimed at fostering increased cooperation between and the integration of air navigation service providers, irrespective of national borders. The FAB concept was expounded in the first legislative package of the SES I namely Regulation (EC) N° 1070/2009 amending Regulation (EC) N° 549/2004, as an airspace block based on operational requirements and established regardless of State boundaries, where the provision of air navigation services and related functions is optimised through enhanced cooperation among air navigation service providers or, when appropriate, an integrated provider, always in a performance-driven perspective. The SES II tackled the creation of FABs in terms of air navigation services provision, in addition to the airspace organisation issues (EUROCONTROL [online], 2018b).

This also implies civil-military coordination in airspace and air traffic management. FABs shall be established regardless of State boundaries. The provision of air navigation services shall be performance-driven and optimised. FABs will become drivers for performance and change the landscape of ATM service provision; they will provide an invaluable tool for ANSPs in reaching binding performance targets. Together with the introduction of a performance regulation and a strengthening of the ATM network functions, the acceleration of the creation of FABs represents the key measure in the new regulatory approach to reach the objectives to enhance current air traffic safety standards, to contribute to the sustainable development of the air transport system, and to improve the overall performance of air traffic

management and air navigation services in Europe. FABs are a vital for reducing airspace fragmentation and are necessary to accommodate the steadily growing traffic, as well as to minimise delays by managing the traffic more dynamically. Objectives for enhancing current safety standards and overall efficiency can best be achieved by increasing the scale of operations, regardless of national borders. This also implies civil-military coordination in airspace and ATM. Under EU legislation, Member States are legally obliged to seek and investigate the possibilities for cooperation that would best meet the objectives whilst ensuring that several requirements are met before establishing FABs through agreements between Member States. Such agreements should also cover the issues of responsibility and liability. Moreover, FABs will become drivers for performance and change the landscape of ATM service provision as they will provide an invaluable tool for ASNPs in reaching new binding performance targets put in place as a consequence of the implementation of the EU Performance Scheme. The formal establishment of FABs was the first aspect monitored by the Commission and implementation is still far too slow for almost all FABs. Delays in delivering operational FABs are holding back the implementation to a significant degree, which in turn generates inefficiencies in the entire European air traffic management system. This results in extra costs of close to € 5 billion a year which are passed on to airlines and their customers in addition to increased journey times, delays and emissions (European Commission [online], 2018c).

## **6. Single European Sky 2+ (SES2+)**

The 2009 SES II package has shown great promise, especially about the application of a more hands-off performance-oriented model of economic regulation. With the implementation of that approach, important lessons have been learned that needed to be included in the regulations to refine the approach. Additionally, the SES II initiative left some overlaps in legislation, so that same provisions were found in several pieces of legislation. To perform these updates, the Commission proposed an interim update of the SES rules, called Single European Sky 2+. The SES2+ proposal was made in June 2013 and is currently in the process for approval by the European Parliament and Council. It focuses on seven main areas: Independence and resources of National Supervisory Authorities (NSAs); Support services; Customer focus; Performance scheme and the Performance Review Body (PRB); Functional Airspace Blocks (FABs); Network Manager (NM); EASA, EUROCONTROL and the institutional landscape. So far, the European Parliament and Council have agreed on their initial positions and in the next step of work, they should agree on a compromise position to enter into force as soon as possible (European Commission [online], 2018b).

## **7. Conclusion**

The Single European Sky is a concrete example of where the EU can make a difference by raising capacity, improving safety and cutting costs while minimising aviation's environmental footprint. This was the initial ambition more than a decade ago, but, the project is still not delivering. Despite some achievements towards a better performing network, the level of cooperation between Member States air navigation service providers is still far from optimal, and the technology used is not harmonised or state-of-the-art. EU Member States must overcome these challenges to achieve a true Single European Sky, which is one of the most fundamental challenges affecting the performance and competitiveness of the EU's aviation system today. For example, a fully optimised air traffic management system would reduce the costs stemming from inefficiencies (delays, and longer routes etc.). As an important step in unleashing this potential for the EU aviation sector, the Commission urges the Council and

European Parliament to adopt the Single European Sky (SES2+) proposals, to ensure the effectiveness of functional airspace blocks and network functions and the swift implementation of the EU-wide targets for the performance scheme based on a fully independent performance review body. The efficient governance of the SES remains a priority for the Commission. The respective tasks of the EASA and EUROCONTROL should be defined in a manner that ensures that both organisations complement each other's tasks, so that overlaps can be avoided, and costs reduced (European Commission [online] 2015).

The SES does not stop at the border of the European Union. Its extension to third 'neighbouring' countries primarily relies on the EU's policy in the field of international relations. This policy, which gives priority to the association and/or integration of third countries into the EU legal framework, also considers the added value of regional cooperation activities carried out at the level of international organisations, such as the International Civil Aviation Organisation and EUROCONTROL. EU representatives are active in these organisations to ensure overall consistency between its action in the external field and action undertaken under the aegis of such organisations. Cooperative operational arrangements with ANSPs from key partners of the EU are also being promoted by the Commission as a significant task of the Network Manager in order to better manage intercontinental traffic to/from the EU and improve the performance of the European ATM network (European Commission [online] 2018a).

## References

- [1] Czegledy, T. Global and European Challenges on Some Issues of Global Governance. In Honová, I., L. Melecký and M. Staničková (ed.). *Proceedings of the 1st International Conference on European Integration 2012*. Ostrava: VŠB-Technical University of Ostrava, 2012, pp. 38 – 47. ISBN 978-80-248-2685-1.
- [2] Eletsky, N. Contradictions of Formation of the Global Economic Governance System. In Kovářová, E., L. Melecký and M. Staničková (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, 2016, pp. 197-209. ISBN 978-80- 248-3911-0.
- [3] EUROCONTROL (2018a). *Single European Sky*. [online]. [cit.2018-02-08]. Available at: <http://www.eurocontrol.int/dossiers/single-european-sky>
- [4] EUROCONTROL (2018b). *Functional Airspace Block (FAB)*. [online]. [cit.2018-02-12]. Available at: <http://www.eurocontrol.int/articles/functional-airspace-block-fab>
- [5] European Commission (2010): *Commission Staff Working Paper on Preparing a Deployment Strategy for the Single European Sky Technological Pillar*. [online]. [cit.2018-02-08]. Available at: <http://ec.europa.eu/transport/modes/air/sesar/doc/2010-sec-2010-1580-f.pdf>
- [6] European Commission (2014). *The European Union Explained. Transport*. [online]. [cit.2018-02-08]. Available at: [https://europa.eu/european-union/file/1232/download\\_en?token=xCqI9RmY](https://europa.eu/european-union/file/1232/download_en?token=xCqI9RmY)
- [7] European Commission (2015). *An Aviation Strategy for Europe*. [online]. [cit.2018-02-08]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015DC0598&from=EN>
- [8] European Commission (2018a). *Single European Sky*. [online]. [cit.2018-02-08]. Available at: [https://ec.europa.eu/transport/modes/air/single\\_european\\_sky\\_en](https://ec.europa.eu/transport/modes/air/single_european_sky_en)



- [9] European Commission (2018b). *Single European Sky II*. [online]. [cit.2018-02-12]. Available at: [https://ec.europa.eu/transport/modes/air/single\\_european\\_sky/ses\\_2\\_en](https://ec.europa.eu/transport/modes/air/single_european_sky/ses_2_en)
- [10] European Commission (2018c). *Functional airspace blocks (FABs)*. [online]. [cit.2018-02-12]. Available at: [https://ec.europa.eu/transport/modes/air/single-european-sky/functional-airspace-blocks-fabs\\_en](https://ec.europa.eu/transport/modes/air/single-european-sky/functional-airspace-blocks-fabs_en)
- [11] European Union (2018). *EU transport policy*. [online]. [cit.2018-02-08]. Available at: [https://europa.eu/european-union/topics/transport\\_en](https://europa.eu/european-union/topics/transport_en)
- [12] Eur-lex.europa.eu (2007). *Traffic management: the creation of the single European sky*. [online]. [cit.2018-02-08]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:124219>
- [13] Eur-lex.europa.eu (2014a). *Framework for creation of the Single European Sky (SES)*. [online]. [cit.2018-02-08]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:124020>
- [14] Eur-lex.europa.eu (2014b). *Air traffic management: Organisation and use of airspace in the Single European Sky*. [online]. [cit.2018-02-08]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:124046>
- [15] Eur-lex.europa.eu (2014c). *Interoperability of the European air traffic management network*. [online]. [cit.2018-02-08]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:124070>
- [16] Eur-lex.europa.eu (2015). *Single European Sky - EU rules on air navigation services*. [online]. [cit.2018-02-08]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:124034>
- [17] Hauer, T. Globalization and Political Economy of Speed. In Kovářová, E., L. Melecký and M. Staníčková (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, 2016, pp. 319-325. ISBN 978-80- 248-3911-0.
- [18] Klenka, M. (2017). Aviation safety: legal obligations of states and practice. *Journal of Transportation Security*, vol. 10, issue 3-4, pp. 127-143.

## What Drives Gamers to Buy Virtual Goods? A Comparative Study of European Gamers

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### **Abstract**

*Nowadays, free-to-play revenue model is growing in popularity with both game developers and players. The basic game is provided free of charge, but players are encouraged to purchase virtual goods, varying from cosmetic elements such as new skins for game character to items offering significant advantage over other players. Due to the relative newness of this phenomena, little research has been devoted to this topic, especially in the European region. In this paper, we identify motivations and antecedents influencing the purchasing behavior of free-to-play gamers, such as the support of the game developer, gaining advantage in the game or player's relationship to their game character. We conduct a quantitative study of 1 107 European gamers (from Czech Republic and Belgium) to compare whether overall attitude, average spend on virtual goods and factors influencing customer's behavior vary across the nations. This approach also allows us to develop a typology of free-to-play gamers in Czech Republic and Belgium.*

**Keywords:** customer behaviour, European gamers, free-to-play games, virtual goods

**JEL Classification:** D12, M31, M37

### **1. Introduction**

According statistics, almost 80 % of the EU inhabitants use the internet regularly and more than half of the EU inhabitants bought some goods on the internet (Pawlasová, 2016). Furthermore, many users from younger generations are highly dependent on the technology (Valečková, 2016). The video game industry is no exception. It is not the obscure relative of movie or book industries it once was. While there are some difficulties in comparing the industries, mainly due to different revenue models, video game sales were almost two thirds of movie sales in 2014 according to Egenfeldt-Nielsen et al (2008), reaching 64.9 billion USD.

Certain part of this growth can be accredited to the rise of free-to-play video games. According to Alha et al (2014), free-to-play games are acquired and played free of charge, but players are encouraged to purchase virtual goods during the play, which can take the form of in-game benefits over non-paying players or skins for game character. In contrast, traditional pay-to-play games require players to purchase the game either upfront or in the form of monthly subscription.

While the phenomena itself is nothing new and can be traced back to the 80s and 90s shareware culture (Cox, 2012), the rise of modern free-to-play titles begun in the early 00s with titles such as RuneScape or MapleStory. Most of these games were produced mainly for the markets with lower purchasing power such as South Korea, Russia or Brazil, the increased competition

for those games soon led some traditional pay-to-play or subscription based games such as Lord of the Rings Online or Dungeons and Dragons Online (Tack, 2013) to be transitioned to the free-to-play model in the late 00's even in the developed markets.

Despite the obvious importance of video game industry and especially the free-to-play phenomena, we find relatively low number of scientific publications in this field. Our aim in this study is to focus on the motivations and reasons that lead gamers to purchase of in-game goods using the Theory of Consumption (Sheth et al, 1991). We also provide a segmentation of gamers and their classification by variables such as age, income and gender. Furthermore, our sampling allows us to compare Czech and Belgian gamers.

## **2. Literature Review**

While free-to-play games are present on various gaming platforms, including PC and console game markets, the free-to-play-games are particularly strong in the mobile and massive multiplayer online (MMO) games segments. The worldwide smartphone market still grows (Spáčil, 2016), which in turn helps to spread the mobile games. In mobile games, in-app purchases in free-to-play made 79 % of total revenues in 2014 in iOS and Android games (Grubb, 2014), with games such as Candy Crush Saga, Clash of Clans or Pokemon GO. Free-to-play massive multiplayer online games are also gaining popularity. The leading title in this category, League of Legends, made 2.1 billion USD revenues by itself in 2017 (Stewart, 2018).

### **2.1 Free-to-Play Revenue Model**

Some free-to-play games don't contain any revenue model and are distributed under freeware license model, generally being released as either fan-made projects or as a part of promotion campaign. Free-to-play games are also not to be confused with game demo versions or trial periods, which some pay-to-play games use to demonstrate the quality and elements of the full version with limited features or game time. Most of free-to-play use a revenue model that is usually called "freemium" (Kumar, 2014). In this model, the game is free to download and play. Players can opt to pay for acquiring game boosts, extra lives or other advantages over non-paying players. Other paid benefits can be merely cosmetic or symbolic, such as graphical enhancements (skins) for player character or other game elements (weapons, vehicles etc.) (Berlo & Liblik, 2016).

In some cases, virtual currency is established and used to purchase virtual goods (Frieling, 2013). Players can either gain the currency by completing game objectives, or by outright purchasing it for real-world money. Usually, this currency is one-way, meaning the currency is only available from the vendor and not from other players, and can't be exchanged back for real-world currency. However, in several rare cases (such as Linden Dollars in Second Life), the virtual currency is freely convertible (two-way), so the players can actually make money by playing the game (Frieling, 2013). The process of purchasing a virtual goods (or virtual currency, which is then used to purchase virtual goods) is often called "microtransaction" (Berlo & Liblik, 2016). It is also worth noting that some authors, such as Alha et al (2014), use the terms free-to-play and freemium interchangeably.

Moreover, the terms freemium and microtransaction is somewhat controversial and is sometimes used in a derogative sense. According to Alha et al (2014), in some games, paying players are offered unfair advantage over non-paying players (pay-to-win approach). In some cases, non-paying player's progress through the game is made very difficult, creating a "paywall". The authors convincingly show that these practices are perceived as unfair and negative by players.

## 2.2 Theory of Consumption Values

Ho & Wu (2012) use Theory of consumption, which was first developed by Sheth et al. (1991) values, to establish context of researching the intent of purchasing virtual goods. Originally, there are five values influencing customer's decision to purchase certain product: functional value, social value, emotional value, epistemic value and conditional value. However, extant literature (Guo & Barnes, 2011; Ho & Wu, 2012; Lehdonvirta, 2009) suggests that due to the specific characteristics of virtual goods, only three groups of motivating factors are particularly important: functional, hedonic and social factors.

Just as ordinary goods have their functionality, people have some demands in terms of **functional values** and performance of virtual goods. Performance of virtual goods is measured most often by the price and benefit of the purchase. Players want to know that buying was worth the cost and helped them to get higher in the players' ranking. So, if are the functional factors important for a player, we can say that his motivation to purchase is mainly in the progress of their character (Van Berlo and Liblik, 2016).

There is no doubt that people feel good feelings when buying goods (**hedonic values**). These feelings are related to the satisfaction of their inner needs and enjoyment. Hedonism also sees the aesthetic aspect of the matter and puts emotion at the forefront. In the online games world, you can also find a hedonistic view of the players because it is not just the functional benefits that players acquire by purchasing virtual goods (Van Berlo and Liblik, 2016). Many players take into account the visuals of their character, the design of the game environment in which they exist. According to individual tastes, they create an aesthetic visual in the game.

Gameplay represents also a **social value** for gamers. It is based on communication and cooperation with other players and social groups. This can have a positive or a negative reaction, which depends on how the teammates react to the purchase of virtual goods to other players. Some authors have already stated that by purchasing goods people want to express their social status and prestige (Bourdieu, 1984). Even when purchasing virtual goods it is. Players often buy virtual goods also to develop relationships with other players. At the same time, they express their game level and experience in the game (Berlo & Liblik, 2016). Buying virtual goods is a way how to distinguish themselves from other players.

## 3. Research Methodology

To examine the attitude and motivation of gamer's purchase of virtual goods, we adopt quantitative approach, using online questionnaire. While some authors apply qualitative approach to a similar issue (see Berlo & Liblik, 2016; Alha et al., 2014), our aim in this paper is to come up with a segmentation of gamers based on their motivations. To develop such segmentation, we use factor and cluster analysis (similarly to Frank et al; 2015) for the typology followed by statistical testing to find out whether segmentation influences gamer's purchasing behaviour. We conclude the analysis by testing the effects of country of origin on gamer's segmentation and said behaviour.

### 3.1 Data Collection and Sampling

We used an online questionnaire to collect the data. In the introductory part, we explained what we mean by free-to-play games and premium content. The main item of our questionnaire were 27 statements inquiring about gamer's opinions on free-to-play games and motivations to purchase premium content. The statements were adapted from the works of Frank et al (2015), Ho & Wu (2012) and Lin & Sun (2007) and elaborated to enable us to study more of Sheth et

al. (1991) consumption values. The respondents were requested to express their agreement on a 5-point Likert scale. The statements are presented in the Appendix. The respondents were also asked about their purchasing behaviour – frequency and usual monthly spend in free-to-play games. Further questions included gamer's favourite free-to-play titles and demographic questions - their age, income, economic status and gender.

The data was collected from October 2017 to January 2018. We collected data from two European Union countries – Czech Republic and Belgium. Similarly to Frank et al. (2015), we used non-probability sampling technique of judgemental sampling (Malhotra & Birks, 2006). As gamers tend to form coherent communities (Hsiao & Chiou, 2012), we inserted a link to our survey on several free-to-play gaming forums and social media sites both in Czech Republic and Belgium, asking gamers for their input. In the end, we collected data from 1 107 respondents. This dataset is significantly larger than in similar studies by Frank et al. (2015) (98 respondents) and Ho & Wu (2012) (523 respondents).

### **3.2 Methods of Analysis**

Factor analysis is a multidimensional statistical method used for data reduction and summarisation. There may be a large number of variables, most of which are correlated and which must be reduced to a level, which is acceptable (Malhotra & Birks, 2006). In this case, factor analysis was used to identify the basic factors to identify smaller groups within a large dataset. We worked with the exploratory factor analysis.

One of the very important goals of factor analysis is to review the structure of relations between the tracked variables and get notice, if it is possible divide them into groups, in which variables from the same groups correlate more than variables from the different groups. The next goal of factor analysis is to create new uncorrelated variables (Hebák et al., 2007).

The estimation of the factor analysis model is based on the principal component analysis. The basic approach is to reduce the size of a task and to create new (auxiliary) variables (Řezanková, 2011).

The next step in this research was cluster analysis. We applied hierarchical and also non-hierarchical clustering. Hierarchical clustering was used to find the appropriate number of clusters. We applied Ward's procedure and as a distance, author of this article used squared Euclidean distance, as suggested in Malhotra & Birks (2006).

We entered the factor loadings (created in the factor analysis) into the hierarchical clustering to determine the ideal number of clusters. Using the agglomeration schedule, we determined that 5 clusters are ideal (Řezanková, 2011). Non-hierarchical cluster analysis was then used to determine cluster membership for each case.

## **4. Findings**

In this section of the paper, we disclose the results of our analysis. First, we focus on the typology of the gamers and then on the effects of country of origin.

### **4.1 Typology of Free-to-play Gamers**

Both results of the KMO measure of sampling adequacy (0.856) and Bartlett's Test of Sphericity (Sig. < 0.001) are well within recommended values (Field, 2013), and we can therefore proceed with the factor analysis. Using the Eigenvalue-one criterion, we determine that our original 27 variables were reduced to 7 factors with total variance explained 58.60 %. Varimax rotation was used. Results of the factor analysis are seen in Table 1.

**Table 6: Results of the Factor Analysis**

Factor	Variables						
	V19	V26	V27	V18	V20	V17	V24
Social	V8	V13	V16	V14	V7		
Functional	V10	V9	V15				
Hedonic	V23	V22	V21				
Quality	V5	V6	V12	V11			
Economic	V3	V4					
Identification	V1	V25	V2				
Emotional							

Source: author's calculation

Then, we combined the works of Sheth et al. (1991), Frank et al. (2015), Berlo & Liblik (2016) and Ho & Wu (2012) to name the factors, using the variables loaded into each factor as a base and utilizing the common theory of consumption values terms.

The first factor comprises mainly of variables concerning player's social motivations, such as reviews (V20) or friend's recommendations (V19). The second factor consists of variables regarding the functional aspect of virtual goods and their ability to help players gain advantages over non-players (V8, V13).

The third factor is composed of variables concerning the visual aspect of the game (V9, V10) or enabling better self-expression (V21). Fourth factor describes the general quality standards of premium content, including the graphical quality (V21, V22).

The fifth factor comprises of economic factors such as the reasonability of premium content prices (V5, V6), and support of game developer (V11). Sixth factor consists of two variables concerning player's relationship to their game character and their goals (V3, V4). Finally, the seventh factor relates to the emotional response to gameplay (V1, V2) and balance of premium content within the game (V25, this item has negative factor loading – if gamers think premium content generates unbalance in the game, it raises the value of the factor).

To develop the typology of gamers based on their beliefs and motivations, cluster analysis was used. First, we applied hierarchical cluster analysis to determine the ideal number of clusters. Using agglomeration schedule, we found out that 5 clusters would be most suitable. Then, we used non-hierarchical cluster analysis (k-means) to determine cluster centres and cluster membership for each case. We named each cluster based on cluster centres for each factor (see Table 2 on the next page): Social aesthetes, Economic aesthetes, Satisfaction seekers, Egocentrics and Performers.

**Table 7: Cluster Centers with the Lowest and Highest Value Highlighted**

	Cluster names				
	Social aesthetes	Economic aesthetes	Satisfaction seekers	Egocentrics	Performers
Cases in each clusters (n)	211	195	154	229	250
Social	0.4566	0.5363	-0.3614	<b>-0.9564</b>	0.2950
Functional	<b>-0.8729</b>	0.2847	-0.7271	0.3303	<b>0.6601</b>
Hedonistic	<b>0.7292</b>	0.5809	-0.6749	0.2172	<b>-0.8518</b>
Quality	-0.3130	0.2381	0.2344	0.1271	-0.1823
Economic	-0.1564	<b>0.7095</b>	-0.8508	0.2307	-0.1086
Identification	0.6370	<b>-0.8516</b>	<b>-0.9630</b>	0.3593	0.3908
Emotional	-0.0612	-0.1543	<b>0.4770</b>	<b>0.4948</b>	-0.5752

Source: author's calculation

We proceeded with a chi-square test of independence to examine the relation between respondent's purchase of premium content purchase and their cluster membership. The relation was significant with  $\chi^2(4, N = 1039) = 70.24, p < 0.0001$ . See Table 3 for the relative frequencies (portions) for each cluster for the "Premium content purchase" variable.

**Table 8: Premium Content Purchase Based on Cluster Membership**

		Cluster names					Total
		Social aesthetes	Satisfaction seekers	Economic aesthetes	Egocentrics	Performers	
Premium content purchase	yes	37.4%	63.6%	70.1%	65.9%	72.8%	62.8%
	no	62.6%	36.4%	29.9%	34.1%	27.2%	37.2%

Source: author's calculation

The segment of Social aesthetes is far less likely to purchase premium content than the other groups (37.4 %). On the other hand, the segment of Performers (gamers who focus mainly on the functional value of the premium content and use it to gain in-game benefits over non-paying gamers) is the most likely to purchase premium content (72.8 %).

#### 4.2 The Effects of Country of Origin

After coming up with the typology of gamers, we focused on another variable present in our research: gamer's country of origin. Because of to the cultural and economic differences between the two countries, where we conducted the survey (Czech Republic and Belgium), some differences in behavior can be expected. Due to the rather limited range of this paper, we focused on two influences: cluster membership and the Premium content purchase in each country.

Chi-square test of independence was used to determine the relation of the Cluster membership and Country of origin. The relation was significant with  $\chi^2(4, N = 1039) = 35.69, p < 0.0001$ . In Table 4 (see next page), the relative frequencies are presented for each of the clusters and country. Perhaps rather surprisingly, Belgian gamers tend to be more in the function-focused clusters (Egocentrics and Performers), with Czech gamers more often occupying the hedonistic segments of Social and Economic aesthetes.

**Table 9: Cluster Membership Based on Country of Origin**

		Cluster names				
		Social aesthetes	Satisfaction seekers	Economic aesthetes	Egocentrics	Performers
Country	Czech Republic	20.2%	14.1%	23.2%	19.8%	22.7%
	Belgium	13.0%	17.9%	8.7%	30.9%	29.5%
Total		18.8%	14.8%	20.3%	22.0%	24.1%

Source: author's calculation

We proceeded with the chi-square test of independence for variables Country of origin and Premium content purchase. The relation was significant with  $\chi^2(1, N = 1093) = 5.52, p < 0.05$ . The relative frequencies are displayed in Table 5. Higher proportion of Belgian gamers tend to purchase premium content in free-to-play games (69.4 % compared to 60.7 % of Czech gamers).

**Table 10: Premium Content Purchase Based on Country of Origin**

		Country		Total
		Czech Republic	Belgium	
Premium content purchase	yes	60.7%	69.6%	62.4%
	no	39.3%	30.4%	37.6%

Source: author's calculation

## 5. Conclusion

This paper investigates the genre of online free-to-play games and purchasing of premium content by the players. Using an online questionnaire, we surveyed 1 107 gamers from two countries, which we used to develop a typology. Using the theory of consumption values, we identify seven factors influencing the purchase of premium content. Applying the statistical test of independence, we found out that some segment of gamers (e. g. the Performers, who seek mainly functional values) are more likely to purchase the premium content.

Furthermore, there is a significant effect of country of origin. Belgian gamers are more likely to purchase premium content than Czech (69.6 % to 60.7 %), while their cluster membership is also varying (Belgian gamers tend to belong to the functional Performers and Egocentrics clusters more, while Czech gamers seem to prefer the more hedonistic factors in segments of Social and Economic aesthetes).

Our research also extends existing theory of consumer values in the field of video games (see Guo and Barnes, 2011; Ho & Wu, 2012; Lehdonvirta, 2009), as those authors were able to identify only 3 values. In our study, we identify 7 influencing values (see Table 1).

While our sample size is quite significant and by far the largest of similar studies, it is still quite limited. We used the method of judgemental sampling, using the forums and social media sites for popular free-to-play games. Gamers who participate in such forums could be potentially different from the population of said game, as they have already invested the time in being part of the community, and their behaviour could vary from the general, casual players of free-to-play games. However, these casual players are rather hard to identify and survey.



Our research could also spread into more diverse countries with different attitude to gaming and other characteristics, which is also the goal of the authors. We also plan to explore more variables within the research, such as the genre of games played, or frequency and amount spend on the purchase of premium content.

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### **References**

- [1] Alha, K., Koskinen, E., Paavilainen, J., & Hamari, J. (2014). Free-to-Play Games : Professionals' Perspectives. In *Proceedings of Nordic Digra 2014*, Gotland (Sweden): Digital Games Research Association, pp. 1–14.
- [2] Berlo, K. van, & Liblik, K.-C. (2016). *The business of micro transactions*. Jönköping University.
- [3] Bourdieu, P. (1984). *Distinction : a social critique of the judgement of taste*. Harvard University Press.
- [4] Cox, K. (2012). *Some Free-to-Play Games Work Out Just Like Shareware Used to: Badly* [online]. [cit.2018-02-22] Available at: <https://kotaku.com/5936743/some-free-to-play-games-work-out-just-like-shareware-used-to-badly>
- [5] Egenfeldt-Nielsen, S., Smith, J. H., & Tosca, S. P. (2008). *Understanding video games: the essential introduction*. London: Routledge.
- [6] Field, A. P. (2013). *Discovering statistics using IBM SPSS Statistics: and sex and drugs and rock "n"roll*. Los Angeles: Sage Publications.
- [7] Frank, L., Salo, M., & Toivakka, A. (2015). Why Buy Virtual Helmets and Weapons? Introducing a Typology of Gamers. In: *BLED 2015 Proceedings*, Bled (Slovenia): Association for Information Systems, pp. 503–519.
- [8] Frieling, J. (2013). Virtual goods in online worlds : basics , characteristics and monetization. In: *Proceedings of GI Jahrestagung 2013*. Berlin (Germany): Gesellschaft für Informatik, pp. 3097–3107.
- [9] Grubb, J. (2014). *Report finds free-to-play microtransactions make up 79% of U.S. app store revenues* [online]. [cit.2018-02-22]. Available at <https://venturebeat.com/2018/03/09/frostpunks-brutal-tale-of-survival-begins-on-april-24/>
- [10] Guo, Y., & Barnes, S. (2011). Purchase behavior in virtual worlds: An empirical investigation in Second Life. *Information & Management*, vol. 48, iss. 7, pp. 303–312.
- [11] Hebák, P., Hustopecký, J., Pecáková, I., Průša, M., Řezanková, H., Svobodová, A., and Vlach, P. (2007). *Vícerozměrné statistické metody 3*. Praha: Informatorium.
- [12] Ho, C.-H., & Wu, T.-Y. (2012). Factors Affecting Intent To Purchase Virtual Goods in Online Games. *International Journal of Electronic Business Management*, vol. 10, iss. 3, pp. 204–212.

- [13] Hsiao, C.-C., & Chiou, J.-S. (2012). The effects of a player's network centrality on resource accessibility, game enjoyment, and continuance intention: A study on online gaming communities. *Electronic Commerce Research and Applications*, vol. 11, iss. 1, pp. 75–84.
- [14] Kumar, V. (2014). Making “Freemium” Work. *Harvard Business Review*, vol. 5, pp. 33–42.
- [15] Lehdonvirta, V. (2009). Virtual item sales as a revenue model: identifying attributes that drive purchase decisions. *Electronic Commerce Research*, vol. 9, iss. 1–2, pp. 97–113.
- [16] Lin, H., & Sun, C.-T. (2007). Cash Trade Within the Magic Circle: Free-to-Play Game Challenges and Massively Multiplayer Online Game Player Responses. In: *Proceedings of DiGRA 2007: Situated Play*, London (UK): Digital Games Research Association, pp. 335–343.
- [17] Malhotra, N. K., & Birks, D. F. (2006). *An Applied Approach Updated Second European Edition*. London: Prentice Hall.
- [18] Pawlasová, P. (2016). Factors Affecting Online Group-Buying Intention in the Selected Countries of the EU: An Extended Perspective on the Theory of Planned Behaviour. In: *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 738–745.
- [19] Řezanková, H. (2011). *Analýza dat z dotazníkových šetření*. Třetí doplněné vydání. Praha: Professional Publishing.
- [20] Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of Business Research*, vol. 22, iss. 2, pp. 159–170.
- [21] Spáčil, V. (2016). Brand Awareness of Mobile Phones Perceived by Generation Y in the European Context. In: *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 883–890.
- [22] Stewart, J. (2018). *LoL is the leading free-to-play game in the world with \$2.1b in revenue in 2017* [online]. [cit.2018-02-22]. Available at: <http://www.dailymail.co.uk/sport/esports/article-5334411/LoL-free-play-game-2017-2-1b-revenue.html>.
- [23] Tack, D. (2013). *The Subscription Transition: MMORPGs And Free-To-Play*. [online]. [cit.2018-02-22]. Available at: <https://www.forbes.com/sites/danieltack/2013/10/09/the-subscription-transition-mmorpgs-and-free-to-play/#5e00ae9f2c35>.
- [24] Valečková, J. (2016). Attitudes to the Modern Technology in the Selected Countries of the EU. In: *Proceedings of the 3rd International Conference on European Integration 2016 (ICEI 2016)*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 1043–1051.

### **Appendix: Questionnaire Statements**

- 10.1. I am satisfied with this type of games.
- 10.2. When I play free-to-play games, I am more satisfied than I am playing paid games.
- 10.3. When I play an online game, I identify myself with the game character.
- 10.4. The goals of the character become my own goals.
- 10.5. The price of a premium content is reasonable.
- 10.6. Premium content is a good product given the price.
- 10.7. If I use a premium content, I can enjoy the game more.
- 10.8. I buy a premium content, because it gives me an advantage in the game.
- 10.9. I buy a premium content, because I want to improve my self-expression to other players.
- 10.10. I buy a premium content, because my game character(s) look better and/or more attractive.
- 10.11. When I buy a premium content, it is important to me that I support the game developer for their work as well as the future development of the game.
- 10.12. Using a premium content helps me make new friends.
- 10.13. I buy game bonuses that bring some advantages (e.g. faster healing, faster restoring mana, faster getting materials, more XP, etc.)
- 10.14. I buy virtual goods that bring new equipment to the game (heroes, tanks, additional equipment for heroes, etc.)
- 10.15. I buy virtual goods that change the game design (skins for equipment, avatars, changing of profile picture, changing view of game surroundings, etc.)
- 10.16. If possible, I buy a premium account which brings me more advantage together.
- 10.17. Special events motivate me to buy premium content (Halloween events, Christmas events, Easter events, Birthday of game events, Summer events, etc.)
- 10.18. Newsletters or banners with news in the game motivate me to buy premium content.
- 10.19. Recommendations from friends motivate me to buy premium content in the game.
- 10.20. Review from streamers motivate me to buy premium content in the game.
- 10.21. Premium content has an acceptable standard of quality.
- 10.22. Premium content is graphically sophisticated enough.
- 10.23. The offer of premium content is sufficient.
- 10.24. The offer volume of premium content should be extended.
- 10.25. Premium content creates improper balance in the game.
- 10.26. My willingness to buy premium content will grow in the future.
- 10.27. I would buy more premium content if I played the game long enough.

## Smart Specialization Concept as a Way of Regional Innovation Performance Boosting

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### **Abstract**

*The concept of smart specialization represents a theoretical approach that suggests an entrepreneurial process of discovery as a way to reveal the areas in which a country or region does the best. In practice, this concept focuses on priorities of regional innovation policy. The concept has been developed within the "Knowledge for Growth" Expert Group advising the EU Commissioner for Research in the field of achieving of Lisbon Strategy goals. Based on this concept, the initiative Research and Innovation Strategies for Smart Specialization RIS3 was launched. All countries and regions have to design their own RIS3 strategies if they want to use the European Structural and Investment Funds to support innovation activities. The paper analyses these key strategic documents for the 2014-20 programming period in Czech regions. It deals with the visions of individual regions as well as the definition of key areas of change and strategic objectives. The evaluation is focused on definitions of individual concepts, particularly regional visions, the specification of areas of change and the reality of the objectives set.*

**Keywords:** European innovation policy, innovation, region, research and development, smart specialization

**JEL Classification:** R11, O31, O38

### **1. Introduction**

In developed countries, innovations represent a key factor for economic growth and socio-economic development. However, the innovation activity is spatially uneven and many countries and regions are not able to exploit their innovation potential (Prokop et al., 2017). This topic is strongly emphasized by institutional theories whose ideas have a significant impact on public policy. In the last about 30 years, innovation policy has shifted increasingly to the regional level (e.g. Hlaváček, 2017). Particularly, this is caused by two facts: The first of them is that innovations are perceived as a territorial phenomenon. Innovations are often the result of specific local conditions that cannot be quickly and cheaply copied or transferred elsewhere. Thus, the regional environment has an important role as the background of the innovation processes (Páger, 2015). The second one is the heterogeneity of the regions, which makes it impossible to create a policy mix that is universally applicable in each region. Policy tools have to be rather tailored to the specific conditions of a particular region. (Isaksen and Nilsson, 2013)

The fundamental requirement for a regional innovation policy is that it has to be based on the region's socio-economic environment and has to focus on the specific needs and problems of

the region. This approach is often called "place-specificity" (e.g. Morgan, 2017). Creation of regional innovation strategies is quite a new phenomenon in the Czech Republic and individual regions differ in experience with it. Another problem can be the fact that regions have limited financial resources for innovations directly governed by regional bodies and they often depend on the sources from the European Union (Šipikal and Parížková, 2009).

The objectives of our article are to compare the application of the smart specialization concept in the Czech regions with low knowledge and innovation potential and to evaluate the visions and strategic objectives of their Research and Innovation Strategies for Smart Specialization (RIS3) strategies with respect to the reality of their achievement. The Ústí, South Bohemian, Hradec Králové and Vysočina Regions have been selected as the regions with low knowledge and innovation potential.

## **2. Development of Smart Strategy Concept in the European Union**

The European Union (EU) approved innovation policy as its political priority, because through its implementation many problems can be solved (Lipková, 2012). In the context of adapting public policy to specific regional conditions, the place-based approach is broadly discussed in scientific literature as well as policy debates. Place-based policy is defined as a long-term strategy oriented to the fight against unexploited potential and elimination of persistent social exclusion at specific locations through external interventions and multi-level governance. The core idea of the approach is that geographical context really matters. Another important feature of this approach is the interventions based on the partnership among different government levels and a combination of knowledge from local and external resources. A place-based approach accents that there are different development paths and that it is necessary to pay attention to details and the institutional context. (Barca et al., 2012) For policy purposes, this approach has been further developed by Barca (2009) in his report for the European Commission that dealt with the reform of the European Cohesion Policy. This report emphasized that the reform of cohesion policy requires a strong political concept and a focus on priorities. It recommended defining about 3 or 4 key priorities for which approximately 60% of resources will be allocated. Innovation was mentioned as the first priority.

While the place-based approach is focused on general public policy, the concept of constructing regional advantage approach (CRA) concentrates more on innovation. This concept stems from similar theoretical ideas. The CRA approach builds on theory development: comparative advantage - competitive advantage - constructed advantage (Cooke, 2007). This concept builds on the theory of competitive advantage developed by M. Porter (1998), but enriches it with the ideas of the concept of innovation systems (Asheim et al., 2011), particularly knowledge base concept (Asheim and Coenen, 2009) and theory of related variety (Boschma and Iammarino, 2009). Constructing regional advantage has to be based on the unique capabilities of regional actors, not just research efforts. Each industry can be innovative, the division of the industries into high-tech and low-tech is not relevant and the regions should build their advantage on the development of the industries that have tradition there. (Asheim et al., 2011) In the practical policy context, the CRA concept is used by the expert group set up by the European Commission (DG Research) and led by professor P. Cooke (European Commission, 2006).

Recently, the greatest attention of the political sphere has been put on the concept of smart specialization, which also stems from the above-mentioned theoretical ideas. This concept deals with the selection of regional innovation policy priorities, in particular (McCann and Ortega-Argilés, 2013). The emergence of the concept is attributed to the expert group Knowledge for Growth led by prof. Dominique Foray, that acted as an advisory body to

Commissioner Janez Potočnik in the area of achieving the objectives of the Lisbon Strategy (European Commission, 2010). The concept suggests entrepreneurial processes of discovery to help identify where the region is doing best. In other words, it is about finding out the research and innovation domains in which the region can excel. Subsequently, the region should orient its specialization around these domains. (Foray et al., 2009) Innovation policy should reinforce strategic technological diversification around key domains and, in particular, build on "technology of general purpose" (sometimes called as key enabling technologies).

An important milestone of the regional innovation policy in Europe was the launch of the RIS3 initiative (Research and Innovation Strategy for Smart Specialization) in 2014, which was inspired primarily by the smart specialization concept, but also by the CRA concept. This initiative has a significant impact on the allocation of resources from the European Structural and Investment Funds to research, development and innovation. In other words, if any EU member state wants to get funds for this field, the ex-ante conditionality is to prepare its own national RIS3 strategy and possibly its regional annexes. The national / regional RIS3 strategies represent an integrated and place-based approach to economic transformation that is built on these 5 key characteristics: focus on national and regional priorities, based on strengths in each country / region, support for practice-based innovation, involvement of stakeholders, and monitoring and evaluation (European Commission, 2012).

### **3. RIS3 Strategies in Regions with Low Innovation Potential**

In our paper, we have focused on four regions in the Czech Republic that have a low knowledge and innovation potential in the long term. According to the analysis by Žitek and Klímová (2016), the Ústí (ULR), South Bohemian (SBR), Hradec Králové (HKR) and Vysočina (VYS) Regions belong to this group of regions. The analysis evaluates the period from 2006 to 2012, and although some of these regions have made some improvements in some indicators, no significant structural change has been detected. There has not been observed any larger differences among the selected regions in terms of overall rating.

The analysed regions have the lowest R&D expenditures expressed as a percentage of GDP (values between 0.45 and 1.24% in 2012). The Ústí Region and the Vysočina Region have below-average share of employees with university degree in the total number of employees. The Ústí and Hradec Králové Regions have a strongly below-average share of enterprises that have introduced technology innovation (according to the survey on innovation activities, CSO 2014). These regions have a logic natural need to eliminate the mentioned shortcomings. However, the extent to which the regions can be successful by 2020 remains a question.

#### **3.1 Strategic Visions**

The introductory point of the design part of RIS3 strategies is their strategic vision. Table 1 shows how the four regions defined their vision. Although we cannot expect more than general ideas from the formulation of strategic visions, let us comment on some facts about the practicability of achieving the vision. The statement "The Usti Region's economy is growing" is quite universal and the economic situation will depend on the general economic situation in 2020. It will show over time, whether the knowledge-intensive industries are developed in the region. Nevertheless, we appreciate the intention to cooperate more intensively with Saxony and this can be good opportunity for this region. A problematic is the question of cooperation "with enhanced regional research" in the region without greater tradition of research. The vision of the South Bohemian Region is limited to a statement of general conditions for the implementation of the mentioned activities, and therefore can be considered realistic.

However, this vision is not sufficiently concrete and ambitious. The Hradec Kralove Region is in a different situation. Although it has the potential of qualified people, it does not achieve good results in innovation enterprise and excellent research. The essence of the Vysočina Region's vision is "systemic support". On the one hand, the Vysočina Region practically does not have R&D capacities in the public sphere, on the other hand, there are many companies with their own R&D activities. It is therefore a question how the policy makers will manage to propose a stimulating support system that will be attractive to the relevant industries in the region.

**Table 1: Strategic Visions of the Selected Regions**

<b>Ústí Region</b>
The Ústí Region's economy is growing and creating job opportunities for educated people. Traditional industries are upgrading, increasing their added value and looking for new directions for development. There is an increase in the number of enterprises that actively use and exploit knowledge and new technologies. This is reinforced by cooperation with enhanced regional research as well as R&D centres in the Czech Republic and Saxony.
<b>South Bohemian Region</b>
The South Bohemian Region is attractive for living and work of talented people, offering attractive conditions for business, investments and innovations, both in the traditional and the new industries that use the knowledge base of the emerging local science and research sphere.
<b>Hradec Králové Region</b>
The Hradec Králové Region – A competitive region with developed innovation enterprise, excellent research and qualified people.
<b>Vysočina Region</b>
The Vysočina Region will be ranked among the regions systematically supporting research, development and innovations by 2020, through specialization on selected traditional as well as new prospective industries with a significant growth potential.

Source: JČK (2014), KHK (2014), ŮLK (2014), VYS (2014)

### 3.2 Key Areas of Change and Specific Objectives

The crucial element of the implementation of the RIS3 strategy is the identification of the key areas of change (KAC), strategic (SC) and specific objectives. Their structure is significantly different in the analysed regions and to a certain extent illustrates the approach of regional authorities to knowledge and innovation management. In general, the RIS3 strategy of the Hradec Králové and Ústí Regions seems to be the most sophisticated.

#### 3.2.1 Ústí Region

The Ústí Region considers human resources and technology transfer as a key focus of the RIS3 strategy. In particular, the former is an important barrier to the development of the region. The strategic objectives within the first KAC are oriented to all levels of education. Popularization of technical fields is primarily concerned to primary schools. The region expects to increase interest in technical secondary schools that produce an insufficient number of graduates. It also expects a close cooperation with businesses. In the case of university graduates it is stated that the only public university in the region produces other type of graduates than those that are demanded in the region. At the same time, graduates are not usually willing to do business themselves. The region will therefore strive for changing the situation. For the second KAC, the starting situation is more complicated for especially two reasons: a lack of information of research organizations and enterprises about the needs and possibilities of the other part, and companies in the region are often not innovative and do not need R&D results. The stated objectives aim at overcoming barriers and support for research activities in the region.

With regard to the indicators that determine the success of the RIS3 implementation (low R&D expenditures expressed as a percentage of GDP, low share of enterprises with R&D as the main activity, low share of enterprises that have introduced technical innovation), it is clear that it will be difficult to achieve targets concentrated on R&D and technology transfer. The region correctly perceives their importance and has to apply various measures to make progress in these areas. On the contrary, some progress can be achieved in the area of human resources through cooperation with businesses, as the strategy rightly supposes.

### *3.2.2 Hradec Králové Region*

The Hradec Králové Region has developed its key areas of change into four domains. In particular, the first three of them (the fourth is the implementation of RIS3) demonstrate the rich experience of strategy makers: increase in innovation performance, excellent public research and the development of human resources for R&D. These domains can certainly be crucial for competitiveness increase. As regards innovation performance, which is very low in the region, the strategy searches for a way of raising interest in doing business in general through consultancy, education and popularization activities. At the same time, it tries to create a system of support for R&D activities in enterprises, particularly to support their ability to cooperate and network. In the case of the second KAC, like the Ústí Region, the Hradec Králové Region also tries to declare its ambition to support R&D transfer. The suggested ways are both promotion of applied research in public research organizations and an increase in the motivation of companies to exploit the results of public R&D. In the field of human resources, it is considered important to popularize science and technology already at primary schools, and to increase the share and quality of graduates of vocational schools. Strong emphasis is put on cooperation of enterprises and schools. According to the RIS3 strategy, it is necessary to set up mechanisms for timely capture of talented students. Simultaneously, the need to improve the quality of secondary schools and university teachers is explicitly mentioned.

The Hradec Králové Region is not only characterized by a low share of enterprises that have introduced technology innovation but also a low degree of cooperation on innovation. The research potential of the region is low too. Support for technology transfer will be similarly difficult as in the case of the Ústí Region. Some of these steps can positively stimulate both research organizations and businesses. The orientation on activities that support education corresponding to the demand in the labour market can be perceived as a suitable approach.

### *3.2.3 South Bohemian Region*

The South Bohemian Region has only set one strategic objective for each of the three key areas of change. The strategic objectives are very similar to the KAC and do not actually develop them. In the area of quality human resources, it is a priority to improve the quality of the workforce so that it meets the requirements of the labour market. This is also related to the need to increase interest in technical fields already at primary schools. At the same time, the region considers it important to positively influence mobility of workforce. The region wants to prevent the departure of qualified people from the region, but also to attract mainly technically educated and researchers from other regions. The second key area is technological transfer. The main problem is the lack of cooperation between academic institutions and the business sphere. The solution is to introduce appropriate policy tools to increase the incentive for enterprises to collaborate with R&D organizations and their willingness to engage in industry platforms and cluster initiatives. The third area of change is the development of enterprise, which means its support in various ways (support for start-ups, consultancy, intellectual property rights protection, support for internationalization).



The South Bohemian Region has the highest level of knowledge indicators among the analysed regions: the highest number of students of natural sciences and engineering & technology, the highest expenditures on R&D expressed as a percentage of GDP, and the highest share of employees with university degree in the total number of employees. This fact increases the chances of the region to succeed in implementing the RIS3 strategy, especially in the first two key areas of change. The impact of measures to promote entrepreneurship depends on the ability of the public administration to connect with businesses through a good communication strategy.

### *3.2.4 Vysočina Region*

The Vysočina Region has defined three key areas of change: higher innovation performance of companies, accessible and skilled workforce and ICT infrastructure. The aim of the first KAC is to increase the share of innovative enterprises and businesses with their own R&D. This aim should be reached mainly through providing various types of business consultancy. In the field of quality of workforce, the emphasis is put on increasing the interest in technical fields (popularization) and increasing cooperation of schools (secondary schools and universities) and enterprises (internships, professional practices, excursions, competitions). The only goal in KAC ICT infrastructure is to cover "gray and white spots" of the region where high-speed internet is not available. This is considered a barrier to enterprise development in these parts of the region.

Evaluating the potential success of the RIS3 strategy in the Vysočina Region, it is worth mentioning, in particular, that the share of enterprises with technology innovation in all enterprises exceeds the average share of the Czech Republic. It also has a sufficient number of students of technical and natural fields. In terms of achieving the specific goals, the building of the ICT infrastructure appears to be the easiest one (if financial resources are available). The question is whether its existence will automatically lead to an increase in entrepreneurial activity.

## **4. Conclusion**

The article dealt with application of the smart specialization concept in selected Czech regions that have a low level of knowledge and innovation potential in a long-time period. We have selected four regions, which are the Ústí, South Bohemian, Hradec Králové and Vysočina Regions. Their common characteristic is mainly a low level of R&D activity, but also other structural problems.

By analysing the key areas of change and strategic objectives of the RIS3 strategies, it was found out that the regions mainly focus on improving the quality and availability of the workforce in technical fields as well as on improvements in the technology transfer. The ambitions of the individual regions are similar, but the prerequisites of their success are different. For the regions with little tradition of research, it is certainly difficult to achieve a qualitative change. The effectiveness of various measures in the education sphere or in the field of business consultancy depends on a number of other aspects. The RIS3 strategies can be an important positive incentive on the way to increasing the competitiveness of the regions.

The concept of smart specialization also recommends regions to focus their strategies on those industries that have tradition and good prerequisites there. In the Czech Republic, seven industries representing the areas of national specializations have been identified. Furthermore, most of Czech regions have added special areas that are concentrated in their territory. Only

two of the four analysed regions, the Ústí and Hradec Králové Regions, defined their own areas of regional specialization.

We are aware of the fact that our research has some limitations. We focused on some basic characteristics of the RIS3 strategies, but more detailed analysis is needed. Further research should be aimed at two main topics. The first of them is the relation and harmony between RIS3 strategies and the Initiative Industry 4.0 that was approved by the Government of the Czech Republic in 2016. The second topic represents the efficiency of implemented policy interventions and their real impact on innovation development and achieving strategy targets.

## References

- [1] Asheim, B. T., Coenen, L. (2005). Knowledge bases and regional innovation systems: Comparing Nordic clusters. *Research Policy*, vol. 34, iss. 8, pp. 1173-1190.
- [2] Asheim, B. T., Moodysson, J. and Tödtling, F. (2011). Constructing Regional Advantage: Towards State-of-the-Art Regional Innovation System Policies in Europe? *European Planning Studies*, vol. 19, iss. 7, pp. 1133-1139.
- [3] Barca, F. (2009). *An agenda for a reformed cohesion policy. A place-based approach to meeting European Union challenges and expectations* [online]. [cit.2018-02-20]. Available at: [www.europarl.europa.eu/meetdocs/2009\\_2014/documents/regi/dv/barca\\_report\\_/barca\\_report\\_en.pdf](http://www.europarl.europa.eu/meetdocs/2009_2014/documents/regi/dv/barca_report_/barca_report_en.pdf).
- [4] Barca, F., McCann, P. and Rodriguez-Pose, A. (2012). The Case for Regional Development Intervention: Place-Based versus Place-Neutral Approaches. *Journal of Regional Science*, vol. 52, iss. 1, pp. 134-152.
- [5] Boschma, R., Iammarino, S. (2009). Related variety, trade linkages, and regional growth in Italy. *Economic Geography*, vol. 85, iss. 3, pp. 289-311.
- [6] Cooke, P. (2007). To Construct Regional Advantage from Innovation Systems First Build Policy Platforms. *European Planning Studies*, vol. 15, iss. 2, pp. 179-194.
- [7] CSO – Czech Statistical Office (2014). *Innovation activities of enterprises in the Czech Republic 2010-2012* [online]. [cit.2018-02-20]. Available at: <https://www.czso.cz>.
- [8] European Commission (2010). *Expert Group “Knowledge for growth”* [online]. [cit.2018-02-20]. Available at: [http://ec.europa.eu/invest-in-research/monitoring/knowledge\\_en.htm](http://ec.europa.eu/invest-in-research/monitoring/knowledge_en.htm).
- [9] European Commission (2012). *Guide to Research and Innovation Strategies for Smart Specialisations (RIS 3)*. Luxembourg: European Union.
- [10] European Commission. (2006). *Constructing regional advantage: principles - perspectives – policies*. Brussels: European Communities.
- [11] Foray, D., David, P.A. and Hall, H. (2009). Smart Specialisation – The Concept. *Working Paper no. 9*. Brussels: Knowledge Economists Policy Brief.
- [12] Hlaváček, P. (2017). Use of innovation vouchers for the regional innovation environment development. *Economic Annals-XXI*, vol. 166, iss. 7-8, pp. 91-95.

- [13] Isaksen, A. and Nilsson, M. (2013). Combined innovation policy: Linking scientific and practical knowledge in innovation systems. *European Planning Studies*, vol. 21, iss. 12, pp. 1919-1936.
- [14] JČK – Jihočeský kraj (2014). *Krajská příloha k národní RIS 3* [online]. [cit.2018-02-20]. Available at: <http://www.risjk.cz/ris>.
- [15] KHK - Královéhradecký kraj. (2014). *Krajská příloha k národní RIS 3 za Královéhradecký kraj* [online]. [cit.2018-02-20]. Available at: <http://www.cirihk.cz/ris3.html>.
- [16] Lipková, L. (2012). Innovation Policy of the European Union. In *Proceedings of the 1st International Conference on European Integration 2012*. Ostrava: VŠB-TU Ostrava, pp. 171-178.
- [17] McCann, P. and Ortega-Argilés, R. (2013). Modern regional innovation policy. *Cambridge Journal of Regions, Economy and Society*, vol. 6, iss. 2, pp. 187-216.
- [18] Morgan, K. (2017) Nurturing Novelty: Regional Innovation Policy in the Age of Smart Specialisation. *Environment and Planning C: Politics and Space*, vol. 35, iss. 4, pp. 569-583.
- [19] Páger, B. (2015). The Relationship between the Information Society and Regional Innovation Performance in the Central and Eastern European Regions. In *CERS 2014: 5th Central European Conference in Regional Science*. Košice: Technical University of Košice, pp. 683-695.
- [20] Porter, M. E. (1998). *The competitive advantage of nations*. New York: Free Press.
- [21] Prokop, V., Stejskal, J. and Kuvíková, H. (2017). The Different Drivers of Innovation Activities in European Countries: A Comparative Study of Czech, Slovak, and Hungarian Manufacturing Firms. *Ekonomický časopis*, vol. 65, iss. 1, pp. 31-45.
- [22] Šipikal, M., and Parízková, J. (2009). Regional innovation strategies in V4 countries. In *CERS 2009 - 3rd Central European Conference in Regional Science, International Conference Proceedings - Young Scientists Articles*. Košice: Technical University of Košice, pp. 1425-1434.
- [23] ÚLK - Ústecký kraj (2014). *Krajská příloha k národní RIS 3* [online]. [cit.2018-02-20]. Available at: <http://kr-ustecky.cz>.
- [24] VYS - Kraj Vysočina (2014). *Krajská příloha k národní RIS 3 za Kraj Vysočina* [online]. [cit.2018-02-20]. Available at: <http://kr-vysocina.cz>.
- [25] Žitek, V. and Klímová, V. (2016). *Aplikace konceptu regionálních inovačních systémů a implikace pro inovační politiku*. Brno: Masarykova univerzita.

## **Position of Visegrad Countries in the European Union in Terms of Their Competitiveness**

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### **Abstract**

*The aim of regional policy is to strive for a balanced development of areas so that they can exploit their potential and achieve state growth. In accordance with the objectives of the European Union, the growth of the competitiveness of the territory is at the forefront. Especially the countries that have undergone the transformation process solve a number of problems related to the structural changes in the economy and the spatial concentration of industry. These changes are further influenced and shaped by the integration process and the entry of countries into the common the European Union market. The organization Visegrad four was established in 1991 to promote cooperation between countries and strengthen the identity of Central European countries in the European Union. The main objective of these countries was the cooperation of countries in the integration with the European Union. The aim of this article is to assess the position and status of the V4 countries in the European Union. Analyse the competitiveness of these countries and their economy performance compared to the original European Union Member States.*

**Keywords:** *integration processes in EU, regional competitiveness, regional disparities in European Union member states*

**JEL Classification:** *R11, R12, R58*

### **1. Introduction**

Competitiveness as a criterion for assessing the success of companies, states and regions is today regarded as a basic indicator of the degree of economic development of market economies. In the European environment, the notion of competitiveness has come to the fore, especially in the context of the European Union's objectives which are focused on achievement of greater competitiveness and employment. They are the main objectives for the 2007-13 programming period. The European Union (EU) uses the notion of competitiveness in the context of economic, social and territorial cohesion, when comity is seen as an essential aspect of contemporary development and a prerequisite for deeper integration. The European Union, using a range of instruments, is trying to help all regions achieve their potential, ie to improve their competitiveness, to raise their standard of living. Supporting the growth of weak regions should lead to the growth of the entire transnational grouping. Cohesion policy in Europe originated in the 1970s as a response to the entry of the European Community with large interregional differences. Cohesion policy has been identified as essential for strengthening the Community and in 1986 the Single European Act introduced legislation for an integrated regional policy. This has led to the development of this policy and focusing on support for underdeveloped regions and the principles of concentration, programming, partnership and complementarity have been introduced.

The Visegrad Four (V4) is the name for the group of Central European regions, namely the Czech Republic, the Slovak Republic, Poland and Hungary. This alliance was formed on February 15, 1991, primarily due to mutual cooperation in the given areas, strengthening of competition and stability in Central Europe and common European integration. These countries are linked not only during the geographical proximity but also there is historical or political proximity. These are the states that have undergone transformation processes since 1989 that have influenced their further development. Transformation processes have been accompanied by rising unemployment, rising inflation, sectoral restructuring, and widening regional disparities. Cooperation has helped states move towards a free democratic society and pan-European integration.

The aim of this article is to evaluate the position of the V4 states in the European Union in terms of their economic performance. The subject of the analysis will be to compare the state of the given economies in 2004 when the V4 countries entered the European Union with their current position. The Regional Competitiveness Index will be used to compare.

## **2. Theoretical Aspects of Competitiveness**

Although the notion of competitiveness is now often bent and used, its exact definition does not exist. Porter (1990) contributed significantly to the development of the theory of competitiveness and laid the foundation for the microeconomic theory of competitiveness. The theory does not stem from the idea that a balanced balance of payments territory is competitive, but stressed the importance of clusters, ie geographical concentration of interconnected firms, specialized suppliers and other institutions. The competitive advantage is seen in the location of factors, knowledge, companies, institutions and customers. Macroeconomic competitiveness can be seen as a competitiveness that has the basics of microeconomic competitiveness, the competitiveness of firms, the quality of the business environment is a necessary condition for macroeconomic competitiveness, which implies high productivity and resource efficiency (Ezeala-Harrison, 2006). Camagni (2002) offers another view on the issue. He said that regions do indeed compete over attracting firms and workers as well as over markets, so regions can be thought that they have advantage in infrastructural, social assets, after that, they are more attractive for firms.

However, the Krugman (1994) rejects the territorial unit to the firm, which emphasizes that the country can not, as a company, exit the market and disappear as a company reaches the point of reversal. A negative view of Czech authors have Klvačová (2008) or Malý (2011), who disagree with the comparison of competitive conditions and a competitive environment at the national level with corporate competition, which according to these authors are subject to tougher and stricter conditions. According to Klvač's competitiveness, it is based on the attractiveness of the country for foreign investors, and emphasizes the role of the government as a creator of environmental stability. These conclusions also identify Nečadová and Soukup (2013) who see a questionable choice of indicators and the representation of soft data or the way data is aggregated as a problem. Despite a number of critical views, the notion of competitiveness is increasingly being used to assess the economy, prosperity and quality of life in the country. In line with this concept, it defines the competitiveness of the Commission of the European Union or the international organization of the Organization for European Cooperation and Development (OECD). The European Commission in the Sixth Report on the Social and Economic Situation and Development of Regions in the European Union of 1999 (European Commission, 1999) as "the ability to produce goods and services that meet the conditions of international markets, while at the same time the ability to achieve high and sustainable incomes ..." (Mouqué et al., 1999 ). The European Commission's Competitiveness

Report says that the economy is competitive if its population enjoys a steadily high and growing standard of living and sustainable high employment (Skokan, 2005). Given the increasing importance of regions for the national economy; experts are increasingly engaged in regional competitiveness rather than national competitiveness.

It is clear from the literature that the definition of regional competitiveness can be viewed from two perspectives. The first is based on the idea that regional competitiveness is given by the aggregation of enterprise competitiveness, the second approach then derives regional competitiveness from macroeconomic competitiveness. For example, Storper (1997, p. 264), which defined regional competitiveness as "the ability of the local economy to attract firms with stable or growing market shares, and at the same time the ability of the regional economy to secure a stable or rising standard of living for the participating parties", stressed the macroeconomic concept. Tvrdň and Šuranová (2007), who argue that there are companies in the region that produce products in line with price and quality requirements of the market and show a sustained profit. Wokoun in the book *Competitiveness of the Regions of the European Union and the Czech Republic* (2012) adds that if the region wants to be competitive, it must secure jobs in reasonable quantity and quality.

Competitiveness is conditioned by a number of interrelated factors that reflect the functioning of the economy in the region. Due to rapid technological development, information technology upgrades, and lower transport costs, cost reduction alone can not provide a competitive advantage for the territory, but its focus is on creating and using new knowledge, innovation, human resource quality, and collaborating with each other. (Dunning, 2000) Today, the systems used to assess competitiveness are based primarily on the productivity of the economy, which is supplemented by other factors that predict, in particular, the quality of life and the sustainability of development. The World Economic Forum (Global Competitiveness Index) and the International Institute for Management Development (World Competitiveness Index) are based on the assessment of competitiveness from disaggregation of aggregate macroeconomic indicators. Martin (2004), seeks a comprehensive analysis of the issues by defining the key factors of economic development, productivity and economic growth. An important indicator of the competitiveness of the area is the amount of goods and services produced. The European Commission, in its sixth periodic report on the social and economic situation and development of the regions of the European Union, considers productivity and employment as the main indicators of competitiveness.

The following analysis will compare countries based on the Regional Competitiveness index from 2016. It is relative new approach which we can use for measurement of competitiveness. This indicator has been brought by Huggins, who has built the UK competitiveness index. It was the first attempt to capture competitiveness with one number. By that time, competitiveness has only been assessed by means of individual indicators. Huggins (2003) attempted to include in the index the indicators evaluating the inputs, outputs and results of the economy. The Regional Competitiveness Index was further developed by the European Union. The European Commission has proposed the Regional Competitiveness Index (RCI), which compares the European Union's Member States and the NUTS2 regions of the European Union in terms of their competitiveness. The RCI Index was also constructed in accordance with the World Economic Forum methodology. The RCI index points to the strengths and weaknesses of the area. The index is constructed using 73 indicators, divided into three areas: Basic group, Efficiency group, Innovation group. Index development began in 2008, and for the first time this index was designed for 2010. The index was also calculated for 2013 and 2016.

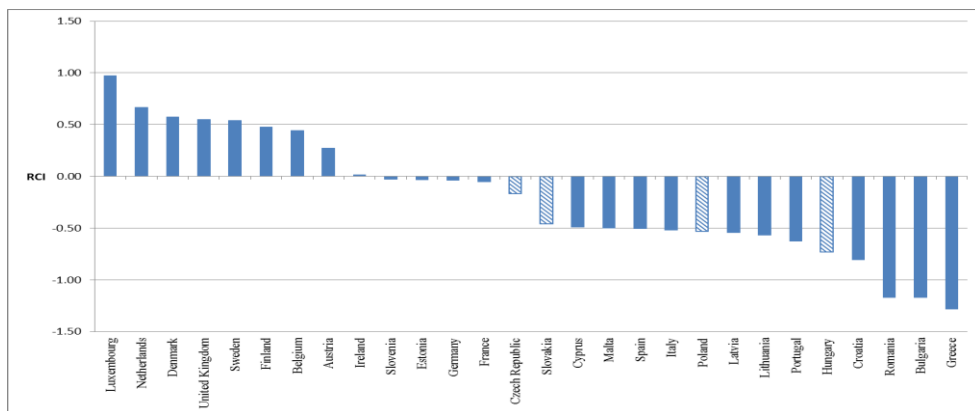
### 3. Comparison of the Position of V4 Countries in the European Union

The European Union is one of the largest multinationals in the world. From the original six Member States (France, Italy, Germany, Belgium, the Netherlands and Luxembourg), which established after the Second World War the European Community, today is a group of 28 states. The increasing number of countries brought with them the need for a revision of international treaties and a deepening of the integration process. The basic pillars of successful integration included the need to reduce interregional disparities between Member States and the need to build an active regional cohesion policy. This demand arose already in the 1980s, when Greece, Spain and Portugal became new member states. The importance of regional policy became more important after the accession of 10 new states in 2004. The members of the European Union became Central and Eastern European states. Among them were the V4 countries, whose economic development was influenced by the process of transformation in the 1990s. and struggling with structural problems and the different economic levels of each region. The best position for transformation processes had the Czech Republic and Slovak republic. It was given by economic situation and by situation on labour market. The conclusions of study of Ružeková, Kašťáková, Žatko (2016) confirms that the position of the Czech Republic is the best from these countries; the worst situation was in the Slovak Republic and in Hungary. The study compared countries of V4 based on Global Competitiveness Index and World Competitiveness Index.

For the purposes of regional policy, the European Union divides regions into three categories - less developed regions (gross domestic product (GDP) per inhabitant < 75% of the European Union average), transition regions (GDP per inhabitant > 75 - < 90% of the European Union average) more developer regions (GDP per inpatient > 90% of the European Union average). Based on these criteria, it allocates money to support regional development. V4 regions, with the exception of capital regions, fall into the less developed regions.

More detailed analysis will be done by using RCI index, which was defined in previous text. When comparing countries according to the Competitiveness Index, they are worse ratings. As can be seen from the graph in Figure 1, the highest value of the index was reported by Luxembourg (RCI +0.97), Greece being the worst rated country with RCI = -1.28. The index values for the V4 countries were negative; the countries are in the second half of the countries surveyed. The best rating was achieved by the Czech Republic, the average rating of the regions was -0.16, Slovakia -0.46, Poland -0.53 and Hungary -0.73.

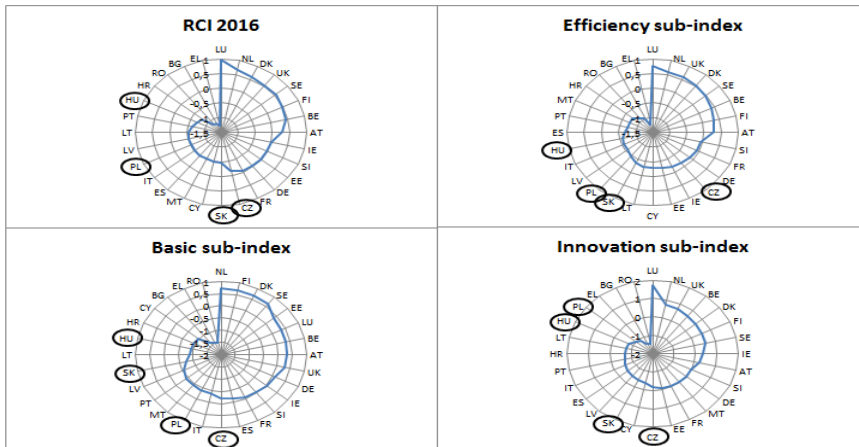
**Figure 1: Regional Competitiveness Index for Members of European Union**



Source: own elaboration based on European Commission (2017)

If we compare the countries in terms of individual sub-indices, V4 countries are in all indicators in the second half of the evaluation, see Figure 2. The Czech Republic has a better rating in the case of an efficiency sub-index that evaluates higher education and lifelong learning, labor market efficiency and market size. Poland has the worst ranking from the above-mentioned countries in the case of the Innovation sub-index, which evaluates the Technological Readiness, Business Satisfaction and Innovation. The basic sub-index includes institutions, macroeconomic stability, infrastructure, health, basic education.

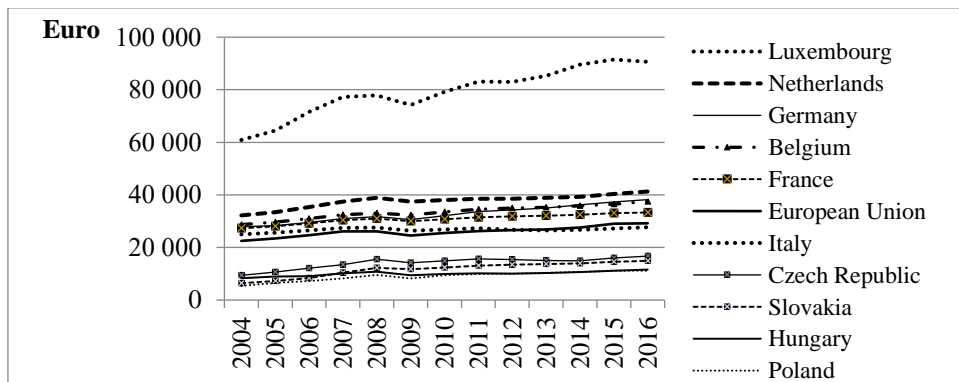
**Figure 2: Comparison of Countries According to Values of Sub-Indices**



Source: own elaboration based on European Commission (2017)

Comparing the country in terms of GDP per capita is in chart in Figure 3. It is clear that the founding countries of the European Union are at higher levels in comparison with the V4 countries.

**Figure 3: GDP per Capita in Time**



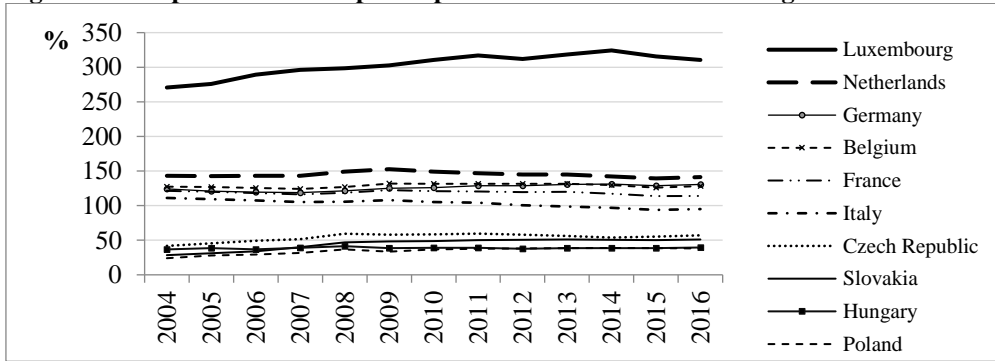
Source: own elaboration based on data from Eurostat (2017)

However, if we compare the trend of the GDP per capita share of the European Union average between 2004 and 2016 (see Figure 4), the growth rate is higher for V4 countries. In the Netherlands, France and Italy, there has even been a decline. Belgium and Germany recorded



an increase of 2% points. The largest growing of share of GDP per capita on the European average was achieved in Slovakia, 23%. The growth of these economies is also evidenced by the rising GDP growth rate, which in 2016 was higher in all V4 countries than in 2006, although in a number of founding countries (the Netherlands, France, Italy) the situation was the opposite.

**Figure 4: Comparison of GDP per Capita of the State with an Average Value in the EU**



Source: own elaboration based on data from Eurostat (2017)

Growth potential also illustrates the findings of the correlation analysis that tested the relationship between GDP per capita and sub-indices RCI. The correlation analysis will be processed in statistical software Statistica 12. This method makes it possible to quantify the dependence of two variables and the aim of this analysis is to determine and describe the relation between the variables. The data from V4 countries were used for this analysis. The analysis emphasizes the determination of the strength of this relationship. The Spearman correlation coefficient ( $r$ ), which examines the dependence between the character sequences and is given by (1): (Hindls, 2007) where  $i$  expresses the sequence number of the variable in the ordered row and  $n$  is the number of cases.

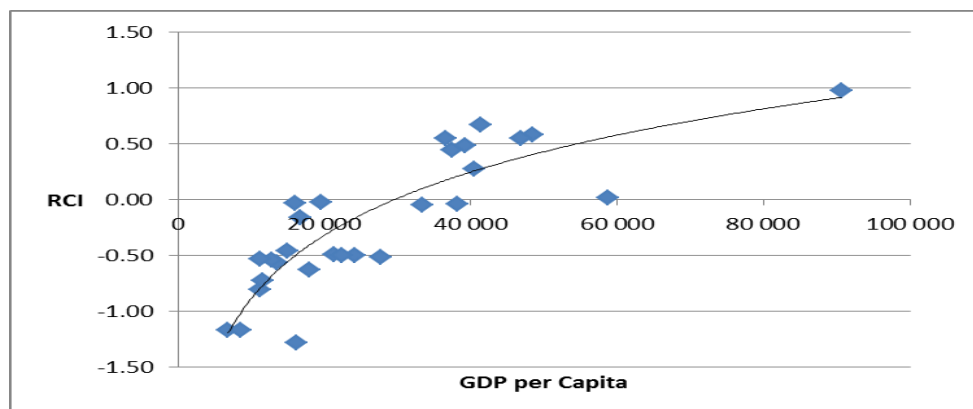
$$r_{i_x r_{i_y}} = 1 - \frac{6 \sum (i_x - i_y)^2}{n(n^2 - 1)} \tag{1}$$

**Table 1: Results of Correlation Analysis**

	Basic sub-index	Efficiency sub-index	Innovation sub-index	RCI 2016	GDP per capita
GDP per capita	<b>0.80</b>	<b>0.77</b>	<b>0.87</b>	<b>0.85</b>	1.00

Source: own elaboration (2017)

The correlation index takes values from -1 to +1, and if the correlation coefficient is +1 between the variables, there is a strong linear dependence, the magnitudes are correlated. If the correlation coefficient is -1, there is a strong indirect linear dependence between the variables. Quantities are uncorrelated if the correlation index is equal to 0. There is no relationship between the magnitudes or the given relationship is not linear. The conclusions of the analysis (see Table 1) show that the second group of indicators included in the Efficiency sub-index is not in so strength relationship with GDP. The growth potential of the given economies is shown in the following graph in Figure 5. While the countries with a higher rating of competitiveness will not achieve such a growth in the competitive index growth of with GDP, worse evaluated countries can improve their situation.

**Figure 5: Graphical Representation of the Relationship - GDP per Capita and RCI**

Source: own elaboration based on European Commission (2017)

#### 4. Conclusion

This article dealt with the evaluation of the position of the V4 countries in the European Union. These are the countries that have undergone a series of social and policy changes that have affected the economic development of the areas in question and influence the development of economic variables over the last 25 years. The paper analysed the situation in the country only on the basis of the competitiveness index, which is considered an indicator of the economic development of the area. Although the European Union V4 rating from the competitive point of view is rather worse, their economic situation, as evidenced by GDP per capita development, has improved. Positive correlations between sub-indices and GDP also result from correlation analysis. These are states with a potential for growth. Countries V4 are among the countries that fund European Union funds to reduce the gap in Europe, and further improvements in their economic situation can be expected in the future. These countries have got potential for further development. The current economic situation indicates it also. This analysis is fundamental analysis and it will be used for more detailed comparison of the countries and evaluation of their integration processes.

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#### References

- [1] Camagni R. (2002). On the Concept of Territorial Competitiveness: Sound or Misleading?, *Urban Studies*, vol. 39, pp. 2395–2411.
- [2] Eurostat (2017). *Statistics* [online]. [cit.2018-02-22]. Available at: <http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/themes>.
- [3] European Commission (2017). *The Regional competitiveness index 2016* [online]. [cit.2018-03-06]. Available at: [http://ec.europa.eu/regional\\_policy/es/information/publications/working-papers/2017/the-eu-regional-competitiveness-index-2016](http://ec.europa.eu/regional_policy/es/information/publications/working-papers/2017/the-eu-regional-competitiveness-index-2016).

- [4] Ezeala-Harrison, F. (2005). On the Competing Notions of International Competitiveness. *Journal of Competitiveness Studies*, vol. 13.1, pp. 80-87.
- [5] Hindls, R. (2007). *Statistika pro ekonomy (Statistics for economists)*. Prague: Professional Publishing.
- [6] Huggins, R. (2003). Creating a UK Competitiveness Index: regional and local benchmarking. In *Regional studies*, vol. 37, pp. 89-96.
- [7] Klvačová, E., Malý, J. and Mráček, K. (2008). *Různé cesty ke konkurenceschopnosti: EU versus USA (Different paths to competitiveness: EU vs. USA)*. Prague: Professional publishing.
- [8] Krugman, P. (1994). Competitiveness: a Dangerous Obsession. *Foreign Affairs*, vol. 73, pp. 28-44.
- [9] Malý, J. (2011). *Globalizace, integrace a české národní zájmy (Globalization, Integration and Czech National Interests)*. Prague: Professional Publishing.
- [10] Martin, R. (2004). *A Study on the Factors of Regional Competitiveness*. Cambridge: Cambridge Econometrics a Rotterdam: Ecorys-nei.
- [11] Mouqué, D. et all. (1999). *Sixth periodic report on the social and economic situation and development of regions in the European Union* [online]. [cit. 16. 2. 2018]. Available at: [http://ec.europa.eu/regional\\_policy/document/pdf/document/radi/en/pr6\\_complete\\_en.pdf](http://ec.europa.eu/regional_policy/document/pdf/document/radi/en/pr6_complete_en.pdf).
- [12] Nečadová, M. and Soukup, J. (2013). Kontroverzní pojem národní konkurenceschopnost a výsledky zemí V4 v mezinárodních žebříčcích konkurenceschopnosti 2007-2012 (The Controversial Concept of National Competitiveness and Results of the V4 Countries in International Rankings of Competitiveness 2007-2012). *Politická ekonomie*, vol. 5, pp. 583-604.
- [13] Porter, M. E. (1990). The Competitive Advantage of Nations. *Harvard Business Review*, vol. 68, pp. 73-93.
- [14] Ružeková, V., Kašáková, E., and Žatko, M. (2016). Comparison of the V4 Economies According to International Competitiveness Indices and the Basic Pillars of the Knowledge Economy. In *International Conference on European Integration 2016*, pp. 838 -849.
- [15] Skokan, K. (2005). *Konkurenceschopnost regionů a faktory jejího růstu (Competitiveness of the Regions and Factors of Their Growth)*. In: *Konkurenceschopnost firem*. Ostrava: VŠB-TU Ostrava, pp. 544-551.
- [16] Storper, M. (1997). *The Regional World: Territorial Development in a Global Economy*. New York: Guilford Press.
- [17] Tvrdoň, J., Šuranová, J. (2007). Teoretické a praktické otázky vyjadrenie regionalnej konkurenceschopnosti v ekonomike Slovenska (Theoretical and Practical Issues of Regional Competitiveness in the Economy of Slovakia). In: *2nd Central European Conference in Regional Science*, pp. 1089-1098.
- [18] Wokoun, R. (2012). *Konkurenceschopnost regionů Evropské unie a České republiky (Competitiveness of the European Union and the Czech Republic)*. Univerzita Jana Evangelisty Purkyně v Ústí nad Labem.

## Impact Assessment of the Free Trade Agreement Between EU and Vietnam on the Economy of the Czech Republic

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### **Abstract**

*After the collapse of the WTO global negotiations, the EU initiative is under way to conclude bilateral free trade agreements between EU member states and third countries in order to deepen the cooperation in common foreign and trade policy. An agreement between the EU member states and Vietnam (EVFTA) should enter into force in 2018. The subject of the EVFTA agreement is not only the elimination of customs tariffs, but also the provisions on non-tariff barriers to trade, public procurement, investment, trade in services and others. The aim of the article is to assess the impact of the EVFTA on the Czech economy and the economy of the EU. The Computable General Equilibrium (CGE) model was selected as an impact estimation tool. The applied model's specification and calibration for the purposes of quantification of the EVFTA's impacts are included in this article. The results represent the quantified economic impacts of elimination of both the tariff and non-tariff barriers to trade between the Czech Republic and Vietnam.*

**Keywords:** CGE model, EVFTA, European Union, free trade agreement, trade policy

**JEL Classification:** F11, F13, F15

### **1. Introduction**

After the collapse of the WTO global negotiations, the EU initiative is under way to conclude bilateral comprehensive free trade agreements between EU member states and third countries in order to deepen the cooperation in common foreign and trade policy and enhancing the contribution of the trading system to sustainable development. (Gazzola, 2016)

The official discussions on Free Trade Agreement between Vietnam on one side and the European Union and its member states on the other side (hereinafter the EVFTA only) began in June 2012. The European Union published the EVFTA consolidated text on 1<sup>st</sup> February 2016. The text of the agreement is currently under way legal revisions and translations into all the official languages of the European Union. Then the agreement will be dealt with by the Council of the EU and the European Parliament. After all necessary endorsements have been completed the procedure will become the EU - Vietnam Free Trade Agreement, binding under international law. The EVFTA will be submitted for ratification to both Chambers of the Parliament of the Czech Republic. The submitted documentation will also include a national study of the EVFTA's impacts on the economy of the Czech Republic. EVFTA should enter into force in 2018, after the ratification by the parliaments of all EU member states.

The EVFTA is modern, sophisticated trade agreements of a new generation. The subject of the EVFTA agreement is not only the elimination of customs tariffs, but also the provisions on non-tariff barriers to trade, public procurement, investment, trade in services and others. The

EVFTA integrates key areas affecting international trade and thus modify synergistically and comprehensively the bilateral trade relations. The goal of this article is to quantify the EVFTA's impacts on the Czech national economy, specifically in the area of elimination of the tariff and non-tariff trade barriers concerning the goods and services exchanged between the Czech Republic and Vietnam.

EVFTA eliminate customs duties on all goods. An overwhelming portion of customs tariffs will be removed when the agreement becomes effective, while a small portion will be removed three, five, seven, ten and more years later (European Commission [online], 2016).

Customs duties on the goods are already very low. Under the EU common customs tariff, the duty on imports from Vietnam represents approximately 4.96 % of the value of Vietnamese goods imported to the Czech Republic, whilst the average Vietnamese duty on goods from the Czech Republic is 5.91 % of the value of imported Czech products. The Vietnamese also still impose export duties, which represent approximately 0.0057 % of the price of goods exported from Vietnam to the Czech Republic.

In terms of exports of goods and services, Vietnam accounts for only 0.06% of Czech exports, while about 0.37 % of Czech imports come from Vietnam. The balance of mutual trade in goods is considerably deficit from the point of view of the Czech side (imports are six times higher than exports). The balance of trade in goods and services in 2016 amounted to -17 billion CZK. However, the traditional trade statistics based on recording the import and export flows in the individual countries do not give us a real picture of the creation of domestic and foreign value added. (Fojtíková, 2016) The economic relations of the Czech Republic and Vietnam take place in a wide range of industries, sectors, business and business activities. In summary, however, it can be said that it is a mutual exchange of value added or trade in value added (TiVA). Estimates of TiVA statistics are conducted internationally by the OECD and WTO. After the last update, data are available for the years 1995, 2000, 2005, 2008, 2009, 2010 and 2011. The share of domestic value added in Czech exports to Vietnam is 69.0%. On Vietnamese exports to the Czech Republic, the share of domestic added value is almost two thirds (65.6%) (OECD [online], 2017).

The estimation of the EVFTA's impacts on the Czech economy was achieved through the Computable General Equilibrium (CGE), which is based on the GTAP world trade database operated by the Purdue University in West Lafayette, Indiana, USA. The CGE method and GTAP database represent one the most advanced analytical instruments applied to macroeconomic impacts of economic shocks. They include, for example, the quantification of the impacts of changed economic and trade strategies used by numerous international organizations (OECD, WTO, WB, etc.). The GTAP database underpins thousands of economic model applications worldwide and to date, the GTAP website contains more than a thousand International Trade studies (Aguar, 2016).

## 2. Methodology

The CGE models were created in order to find a way of predicting economic strategy's impacts on complex and interconnected systems: e.g. a single customs tariff change's impact on multiple markets of a given economy or even more markets of more economies (regions). One of the lines of the CGE models development may be seen as a direct extension of the input-output analysis application, in which the original input-output analysis weaknesses like the absence of induced effects or substitutions among products, semi-finished products, or production factors are compensated for through the inclusion of economic behavioural models of firms, consumers, and selected limitations (budgets, maximum debt, trade balance setting, etc.).

There are two basic limitations that must be followed during the model design: availability of data necessary for the model's basic calibration and mathematical solubility, i.e. the correct number of exogenous variables and parameters, since the number of variables used in CGE models exceeds the number of their equations. It means that reaching usable results requires adding the correct number of "variables" to the model from outside. Despite the fact that even the CGE basic model in the GTAP database may only be described as extremely comprehensive and complex, there are still numerous factors that are not included in the model and its results (Burfisher, 2012):

1. Neither the model, nor the database works with any product quality differences. For example, they do not consider any potential changed quality impacts on value provided to the consumers. In these days, there is probably no sufficiently empirical model (and database), which would be completely able to process this requirement.
2. The results do not significantly reflect on any potential impacts in the form of expanded consumer choices that are often associated with the trade liberalization.
3. Neither the basic GTAP model structure, nor GTAP database directly includes any data on non-tariff barriers. This data must be either added to the model from outside, or these barriers' impacts must be approximated through other parameters.
4. The model does not analyse impacts on foreign investment flows or changes in the public contracts area.
5. The model does not include any effects of changed consumer behaviour and its impacts on the long-term accumulation of savings and subsequent capital generation in the individual sectors.
6. The model does not reflect the multiplication effects of additional household expenses.
7. The model does not include any import quota regimes.

### ***2.1 Mathematical Structure of the Model***

The design of the model consists from several steps in which the concrete, most suitable structure of the model is defined:

1. For simpler interpretation purposes, all the 140 regions available in the GTAP database were merged into nine areas, which seemed to be key for the EVFTA's impacts analysis. They were: Czech Republic, the rest of the EU countries, Vietnam, the rest of the ASEAN and the rest of the world. The goal was to analyse effects associated with exports through the European market and impacts on imports from semi-finished products source countries.
2. The sectors were left in their completely disaggregated into 57 branches. Despite the fact that the majority of the specified branches will not be critical for the Czech economy, this depth of detail seems to be justified due to the more detailed mapping of the partial impacts of the liberalization of trade between Vietnam and the European Union. The goal is to cover sectors key for the Czech Republic without any unnecessary complications.
3. Regarding the production factors, the standard GTAP model classification was preserved. It includes capital, land, natural resources, and educated and uneducated labour. To model short-term impacts, we kept both the uneducated labour and capital mobile. The long-term impacts were then estimated on the basis of inter-sector mobile labour and capital inputs.

4. The model's comparative-static variant was kept, i.e. its results indicate what the current Czech economy would have looked like (or the 2011 reference year economy), if it had faced significantly eliminated barriers of international trade barriers suggested by EVFTA, while its available capital, labour, firms behaviour, and consumer behaviour remained unchanged.
5. Cobb-Douglas production function is used, with constant returns to scale and decreasing returns to labour and capital.
6. Constant unemployment rate with flexible wages, in the short run mobile skilled labour force, but immobile capital and unskilled labour force, in the long run all types of factors are mobile.

If the mathematical model structure is applied together with the data from the GTAP database, it is possible to calibrate all the missing model parameters. During calibration, the unknown parameters are calculated, providing the analysed economies behaved. During the selected referential period as they should have optimally behaved. In the next phase, the mathematical model (now featuring information generated during the calibration) was used to simulate the EVFTA's impacts.

### 2.1.1 Calibration of the EVFTA's Economic Impacts Evaluation Model

To model the EVFTA's economic impacts on the Czech economy, it was necessary to record the custom tariff changes completed both in Europe and in Vietnam. We utilized the data from the World Trade Organization in our classification per the Harmonized system and applied a four-position code (WTO [online], 2017). The custom tariff savings were identified right after the EVFTA became effective and upon expiration of all the transitional periods (i.e. after four, eight and sixteen years after the EVFTA became effective).

These import custom tariff savings (the *tms* variable in the GTAP database) converted to percentages represent an economic shock whose impacts on the macroeconomic equilibrium of the Czech economy will be modelled. However, besides the custom tariff savings, the EVFTA will also contribute to the elimination of international trade non-tariff barriers. The scopes of non-tariff barriers faced by the Czech or European exporters in Vietnam and, on the other hand, the barriers affecting the Vietnamese goods exporters on the European markets, may be roughly estimated on the basis of the non-tariff barriers (NTBs) database produced by the World Bank (Kee, 2005) in classification per the Harmonized system and with its four-position code division. However, we may assume that the gradual implementation of coordination mechanisms in the Technical Barriers to Trade (TBT) and Sanitary and Phytosanitary Standards (SPS) areas will eventually contribute to even greater savings in the area of non-tariff trade barriers between the EU countries and Vietnam.

Therefore, to estimate the impacts of trade liberalization in the area of non-tariff trade barriers (the *ams* variable in the GTAP database), we model the reduced NTB's impacts as impacts of a 0% company costs reduction right after the EVFTA becomes effective and a rather modest 1%, 2% and 3% cost reduction respectively after four, eight and sixteen years after the EVFTA become effective. In connection with this, one may assume that the EVFTA will generate much greater savings in the NTBs area on a long-term basis. It is also important to remember that the NTB estimates completed by the World Bank are converted *ad valorem*; however, one may expect their relative importance will decrease with a greater foreign trade volume (Egger, 2015).

**Table 1: Annual Savings Through the EVFTA Tariffs and NTBs Reduction (in CZK)**

	<b>Right after EVFTA becomes effective</b>	<b>4 years after EVFTA becomes effective</b>	<b>8 years after EVFTA becomes effective</b>	<b>16 years after EVFTA becomes effective</b>
Import custom tariff savings during exports from the Czech Republic to Vietnam	4 200 206	23 049 160	64 648 576	97 374 901
Import custom tariff savings during imports from Vietnam to the Czech Republic	253 538 435	345 692 118	474 273 447	474 273 447
Export custom tariff savings during imports from Vietnam to the Czech Republic	0	569 329	1 521 847	3 722 013
NTB savings during exports from the Czech Republic to Vietnam	0	43 808 704	87 604 202	131 406 303
NTB savings during imports from Vietnam to the Czech Republic	0	66 247 899	132 517 808	198 822 933

Source: own calculations based on (EUROSTAT [online], 2017), (WTO [online], 2017), and (Kee, 2005)

### 3. Results and Discussion

Table 2 indicates only a very small change in aggregate performance of the Czech economy caused by the impacts of EVFTA. The Czech gross domestic product will probably decrease, but only in hundredths of percent, which is undoubtedly caused by a strongly deficit trade between Vietnam and the Czech Republic. It seems that even removal of the customs and non-tariff obstacles in international trade will not lead to rapid or fundamental improvement of the Czech position in international trade with Vietnam. This is also indicated by a very low increase in the total Czech exports and imports (again in hundredths of percent). The level of wages in the Czech economy will probably respond to adoption of the EVFTA Agreement by a slight drop, which will in fact gradually vanish over the time.

The deteriorated conditions of the terms of trade and the strongly deficit trade balance between the Czech Republic and Vietnam will be manifested by a drop in the real welfare of the citizens of the Czech Republic. Foreign trade and more efficient allocation of manufacturing sources will contribute to reduction of the drop in welfare of Czech citizens only after all of the transitional periods.

The GTAP model anticipates significant technological changes also in the case of Vietnam, which, however, are reflected negatively in the Czech economy. It should be pointed out again that also the real welfare responds to the EVFTA Agreement with only very little, or *de facto* negligible reduction (in single dollars per capita per year).

But it can be confirmed that the Czech economy as a whole will be affected by relief of the customs and non-tariff obstacles within the EVFTA Agreement very weakly, with slightly



prevailing negative effects. An analysis of the sectoral impacts caused by adoption of the EVFTA Agreement, however, indicates somewhat more reassuring perspectives.

**Table 2: Macroeconomic Impacts of Adoption of the EVFTA Agreement**

Sectors	Right after EVFTA becomes effective	4 years after EVFTA becomes effective	8 years after EVFTA becomes effective	16 years after EVFTA becomes effective
Gross domestic product	-0.026 %	-0.023 %	-0.019 %	-0.015 %
Exports	0.000 %	0.001 %	0.010 %	0.014 %
Imports	-0.007 %	-0.003 %	0.008 %	0.014 %
Wages	-0.023 %	-0.018 %	-0.012 %	-0.007 %
Welfare [in million USD]	-15.249	-13.088	-12.222	-10.366

Source: Own calculations based on (Aguiar, 2016)

**Table 3: Impact of EVFTA on the Change of Production of Selected Sectors in the Czech Economy**

Sectors	Right after EVFTA becomes effective	4 years after EVFTA becomes effective	8 years after EVFTA becomes effective	16 years after EVFTA becomes effective
Agricultural and food-processing	-0.005 %	-0.010 %	-0.014 %	-0.013 %
Textile	-0.041 %	-0.154 %	-0.433 %	-0.385 %
Engineering and electrotechnical	0.006 %	0.014 %	0.037 %	0.040 %
Automotive	0.001 %	0.000 %	-0.005 %	-0.009 %
Chemical	0.004 %	0.006 %	0.004 %	-0.002 %
Glass-producing	0.003 %	0.004 %	0.050 %	0.045 %
other manufacturing	0.004 %	0.009 %	0.042 %	0.040 %
ICT services	0.003 %	0.002 %	0.001 %	-0.001 %

Source: Own calculations based on (Aguiar, 2016)

All sectoral changes in the volume of production as they are summarized in Table 3 are in hundredths or rather thousandths of percentage points. The only exception is the textile industry, which will probably be affected by liberalisation of international trade between the EU and Vietnam most significantly (the model estimates a drop in production of the Czech textile industry by 0.385 % in the horizon of sixteen years after adoption of the EVFTA Agreement). By contrast, mechanical engineering, electrotechnical and other processing industries as well as the glass industry can expect a slight positive impulse.

Regarding exports from the CR to Vietnam (see Table 4), it seems that except for export of ICT services, the EVFTA Agreement will lead to increase of Czech exports to Vietnam in all of the analysed sectors. The GTAP model anticipates the most significant export in the sector of Czech glass and textile industries, then automotive, mechanical engineering,

electrotechnical and other processing industries and of course also in the segment of agricultural and food exports. However, at this point, it is again necessary to point out the strongly deficit balance of the Czech-Vietnamese trade, especially precisely in the textile industry. In the GTAP database, the chemical sector also includes the pharmaceutical area, so it is not possible to express the impact on the pharmaceutical industry separately. The impact of EVFTA on mutual trade in the pharmaceutical industry between the EU and Vietnam is presented by (Vu, 2016).

**Table 4: Impact of EVFTA on the Change of Export Structure from the Czech Republic to Vietnam**

Sectors	Right after EVFTA becomes effective	4 years after EVFTA becomes effective	8 years after EVFTA becomes effective	16 years after EVFTA becomes effective
Agricultural and food-processing	4.545 %	10.390 %	21.104 %	20.779 %
Textile	23.144 %	20.087 %	247.598 %	220.524 %
Engineering and electrotechnical	1.959 %	7.153 %	20.729 %	35.034 %
Automotive	3.061 %	-2.041 %	35.714 %	55.102 %
Chemical	5.903 %	8.912 %	20.255 %	13.657 %
Glass-producing	6.250 %	0.781 %	317.188 %	292.188 %
Other manufacturing	1.724 %	0.000 %	52.586 %	44.828 %
ICT services	4.714 %	2.357 %	2.357 %	-0.673 %

Source: Own calculations based on (Aguiar, 2016)

The structure of imports from Vietnam to the Czech Republic will be more markedly manifested by further growths of imports of textile products from Vietnam to the Czech Republic (with regard to the multiple deficit of the Czech-Vietnamese trade in this sector, a more significant pressure to equal this strong imbalance cannot be anticipated even after implementation of the EVFTA). Conversely, a drop in imports from Vietnam can be anticipated in the segment of mechanical engineering, electrotechnical and other processing industries and also in the field of ICT services.

However, it should be stressed again that even after removal of custom barriers and reduction of non-tariff barriers, which the EVFTA Agreement proposes, Vietnam will still remain rather a marginal partner in Czech foreign trade. Therefore, elimination of obstacles in international trade with Vietnam will be reflected in the structure and volume of total exports and imports from/to the Czech Republic only by marginal changes (see also Table 2).

**Table 5: Impact of EVFTA on the Change of Structure of Imports from Vietnam to the Czech Republic**

Sectors	immediately when EVFTA becomes effective	4 years after EVFTA becomes effective	8 years after EVFTA becomes effective	16 years after EVFTA becomes effective
Agricultural and food-processing	29.269 %	27.482 %	28.634 %	26.529 %
textile	27.251 %	36.669 %	89.992 %	80.892 %
Engineering and electrotechnical	9.925 %	2.416 %	-6.758 %	-8.880 %
Automotive	0.000 %	0.000 %	0.000 %	0.000 %
Chemical	19.524 %	12.307 %	3.089 %	-0.506 %
Glass-producing	7.080 %	7.965 %	7.080 %	4.425 %
Other manufacturing	3.715 %	-0.774 %	-10.217 %	-12.229 %
ICT services	-7.942 %	-9.386 %	-14.801 %	-15.162 %

Source: Own calculations based on (Aguiar, 2016)

#### 4. Conclusion

Elimination of tariff and non-tariff barriers to trade will take place under the EVFTA over a number of transition periods ranging up to 16 years. Czech exporters will save around 4.2 million CZK after the entry into force of the agreement, but this amount will gradually increase to 97 million CZK. According to our estimates, removal of non-tariff barriers could bring additional savings of up to 131 million CZK. The perspectives for the Czech textile industry are particularly promising in terms of Czech exports (the increase in exports up to more than twice the current volume), the glass industry (up to three times the current volume). Automotive exports have the potential to grow by as much as 55 %, the machinery and electrotechnical industry by 35 %, food and agriculture by 21 % and chemical industry by 14 %. The overall impact on Czech exports, however, is negligible (+ 0.014 %).

Czech importers could save about 253 million CZK immediately after the entry into force of the agreement, by gradually removing customs barriers (both import and export), their savings could increase to 478 million CZK. Removing non-tariff barriers has the potential to bring additional savings for importers rising up to 199 million CZK. From the point of view of Czech imports, the most significant increases can be expected in the textile industry (+ 80 %) and in the food industry (up to + 30%). The drop of imports according to GTAP estimates will affect the engineering and electrotechnical industry (down by - 10 %) manufacturing industry (approx. - 12 %). However, the overall impact on Czech imports is as tiny as in the case of exports (+ 0.014 %).

Thus, the impacts of the EVFTA are very weak. The EVFTA is likely to slightly slow down the pace of economic growth (GDP growth) of the Czech economy, in the order of 0.015 % to 0.026 %. The impact on wages can be expected in similar dimensions. Wage growth can be expected in the engineering, electrotechnical, glass and other manufacturing industries (in the order of hundredths percent), decrease of wages will affect especially the textile industry

(about – 0.4 %). The welfare impact is assumed to be rather negative (decrease in the range of USD 1 – USD 1.5 per inhabitant per year).

Multiple effects associated with the non-tariff barriers elimination, including the measures in the area of investments, public procurement, and services, depend on their implementation after the EVFTA becomes effective. That is why it is important for the Czech Republic to be involved either through its professional and special-interest associations and chambers, national certification bodies, and, of course, at the national administration level and diplomacy, in the implementation of the agreement measures and to actively strive to be represented in the EVFTA commissions. In connection with this, it is important to monitor the current issues and challenges of the international trade with Vietnam and to purposefully promote our interests on the international field. It is very important to:

1. Deepen cooperation with professional chambers, entrepreneurial special-interest (export) associations, etc. – for example through round table events such;
2. Stimulate contacts among trade and professional chambers in the Czech Republic and Vietnam – for example through trade (entrepreneurial) missions or at convenient occasions;
3. Increase the effectiveness of distribution of information on the current status of EVFTA implementation;
4. Monitor the impacts on the trade balance and Czech economy and continuously evaluate potential opportunities and threats (Kocourek, 2017).

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### **References**

- [1] Aguiar, A, Narayan, B. and McDougall, R. (2016). An Overview of the GTAP 9 Data Base. *Journal of Global Economic Analysis*, vol.1, iss. 1, pp. 181–208.
- [2] Burfisher, M. (2012). *Introduction to Computable General Equilibrium Models*. USA: Cambridge University Press.
- [3] Egger, P., Francois, J., Manchin, M. and Nelson, D. (2015). Non-Tariff Barriers, Integration and the Transatlantic Economy. *Economic Policy*, vol. 30, iss. 83, pp. 539–584.
- [4] European Commission (2016). *EU-Vietnam Free Trade Agreement: Agreed text as of January 2016* [online]. [cit. 2017-12-22]. Available at: <http://trade.ec.europa.eu/doclib/press/index.cfm?id=1437>
- [5] EUROSTAT (2017). *Statistics* [online]. [cit.2017-12-22]. Available at: <http://ec.europa.eu/eurostat/>
- [6] Fojtíková, L. and Vahalík, B. (2016) Trade in Value Added and Its Impact on the Czech Foreign Trade. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 229–238.

- [7] Gazzola, P., Sepashvili, E. and Lo Parco, A. (2016). EU Integration for a Successful Eastern Partnership: Trade and Sustainability. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 247–254.
- [8] Kee, H., L. et al. (2005). *Ad-Valorem Equivalents of Non-Tariff Barriers* [online]. [cit.2017-12-22]. Available at: <http://go.worldbank.org/KTJBB6BHA0>
- [9] Kocourek, A. and Šimanová, J. (2017). Impact Assessment of the CETA for the Czech Economy through CGE Modelling. In *Liberec Economic Forum*. Liberec: Technical University of Liberec, pp. 36-45.
- [10] OECD (2017). *Trade in Value Added* [online]. [cit. 2017-12-22]. Available at: [http://stats.oecd.org/Index.aspx?DataSetCode=TIVA2015\\_C1#](http://stats.oecd.org/Index.aspx?DataSetCode=TIVA2015_C1#)
- [11] Vu, H. (2016). Assessing potential impacts of the EVFTA on Vietnam's pharmaceutical imports from the EU: an application of SMART analysis. *Springer Plus*, vol. 5, iss. 1.
- [12] WTO (2017). *World Trade Organization Tariff Analysis Online* [online]. [cit.2017-12-22]. Available at: <http://tao.wto.org/default.aspx?ui=1>

## **Challenges of Inclusive Development in the Context of the EU 2020 Strategy. The Case of Poland**

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### **Abstract**

*The aim of the article is to identify key challenges of inclusive development in Poland. The notion of inclusive development has not been unambiguously defined so far, although this issue has been dealt with for years by recognized opinion-forming international organizations such as EU, IMF, OECD and the World Bank. The paper reviews the definition of inclusive development. A universal definition of this development was formulated, and then a method of its measurement in Poland was proposed, taking into account the availability of public statistics data. The measurement was carried out at the level of communes, assuming that overcoming the challenges of inclusive development is particularly important in small regions inhabited by local communities. The conclusions from the analysis was confronted with the assumptions of the EU 2020 Strategy.*

**Keywords:** *inclusive development, Polish communes, the EU 2020 Strategy*

**JEL Classification:** *O15, R11, R19*

### **1. Introduction**

The growing interest in the concept of inclusive development stems from the increasing lack of acceptance for the social inequalities which continue to grow, and the rising unevenness in the distribution of the benefits caused by the economic growth. Today, the effects of growth are consumed by a small group of society, while the rest of the world's access to these benefits is very limited (IMF, OECD, UN, WBG, 2000; UNDP, 2016; G20, 2017; European Commission, 2010).

The gap between the economic growth and the social development can be observed not only on a global but also country and regional scale, and it is not exclusively the domain of poor countries. The contributing factor to this situation is the liberal economic system and also, in recent years, the world's financial crisis and its ongoing consequences. The increasingly visible income inequalities as well as the growing scale of poverty stunt the dynamism of the economic growth (Atkinson, 2017; Piketty, 2015; Stiglitz 2013).

However, no universal set of tools that would guarantee „the inclusiveness” of the socio-economic system has been developed yet. This is mainly due to the lack of an explicit, universally agreed on and respected definition of inclusive development. The lack of such definition hinders the measurement of this phenomenon, seriously limits the ability to diagnose its scale and makes identifying all the accompanying challenges difficult. An additional difficulty is the specific conditions that have an impact on the social situation in a given country or region, and thus on the degree of "inclusiveness" of its socio-economic system. The

lack of unambiguous understanding of “inclusiveness” hinders all the actions that might have been taken to generate the inclusive growth or, in the best-case scenario, makes them not optimally effective. As White said: “the absence of clarity about objectives is not helpful for policymakers” (White, 2012, p. 280).

The aim of this article is to identify the key challenges of the inclusive development in Poland. That is why various definitions of inclusive development will be discussed, a universal definition of such development will be suggested as well as the best way to measure it in Polish conditions. The measurement of the inclusive development will be made at the level of communes due to the fact that searching for ways to implement the idea of inclusive development and overcoming the accompanying barriers is particularly important in small regions inhabited by local communities, where setting a community of goals for a given idea may be the most effective.

## 2. Definition Problems

Literature and documents published by respectable and opinion-forming institutions that deal with social inequalities and inclusive growth, such as: International Monetary Fund, Organization for Economic Co-operation and Development, United Nations, The World Bank, European Commission do not define inclusive development unambiguously which causes difficulties in creating a precise line of action in order to achieve results expected by the society.

Ranieri and Almeida Ramos, who have analyzed over a dozen reports and studies on inclusive growth and development, indicate 15 elements that individual authors treat as crucial in defining such development. These are: poverty, inequality, growth, productive employment, capabilities/empowerment, gender inequality, access to infrastructure, social protection, participation, targeted policies, basic social services, good governance, opportunity, barriers for investment, benefits of growth (Ranieri, Almeida Ramos, 2013, p. 18).

In general, there are four different approaches to defining inclusive growth and development. The first deals with inclusive growth (and development) as a synonym of pro-poor growth, i.e. one that improves the economic situation of the poorest members of society (IMF, OECD, UN, WBG, 2000, p. 21; OECD, 2001, p. 18). Such improvement can be absolute, when incomes of the poorest grow (Ravallion, Chen, 2003, p. 93-99; Grosse et al., 2008, p. 1022), or relative, when the income of the poorest grows faster than the income of the rest of the society (Cord et al., 2003, p. 3; White, Anderson, 2001, p. 267-289; Grosse et al., 2008, p. 1022). In the latter case there is a reduction in income inequalities.

The second approach exposes the non-profit outcomes of growth, treating poverty as a multidimensional phenomenon (Kakwani, Silber, 2008, p. 987-991). Poverty can be demonstrated not only by low income but also by limited access to education and medical services, poor nutrition and a small share in overall well-being (Grosse et al., 2008, p. 1023). The improvement of the situation of people with the lowest income in terms of non-income dimensions of poverty is evidence of inclusive development, while the increase in their incomes is related solely to inclusive growth (Rauniyar, Kanbur, 2010; McKinley, 2010; Klasen, 2010).

There is also a process approach. Its supporters claim that the poorest people should participate actively in the process of inclusive growth (through involvement in the labour market) and should benefit to a large extent from its effects (Kakwani, Pernia, 2000, p. 3).

Another concept combines the effects of growth with the process approach. According to this concept, every member of society should participate in the process of growth, in a sense that they should participate in the benefits of economic growth and at the same time contribute in an efficient way to this growth. It means that inclusive growth is derived from improving the labour productivity and increasing the size of the economy that is based on investing rather than redistributing sources to the most economically weak (Ianchovichina, Lundstrom, 2009, p. 3).

Even though the discussions concerning inclusive growth and development in the practical and theoretical fields have not resolved the problem with finding an unanimous definition of these terms, by touching on the various aspects of inclusiveness, indicate its basic feature. It is social inclusiveness, broadly understood. Inclusive development is thus a development that enables social inclusion. Ensuring social inclusion requires: reducing unemployment, poverty and inequalities, improving employment efficiency, ensuring gender equality, providing access to infrastructure, social security and basic social services, good governance and participation in social life.

### **3. Inclusive Growth in Europe 2020 Strategy**

In Poland, the issue of inclusive growth is most commonly discussed in the context of Europe 2020 Strategy (*Strategy*). For Poland, as a EU member, the goals of this *Strategy* set the direction in which the socio-economic politics will go between 2010 and 2020. In the *Strategy*, the inclusive growth is one of the three priorities, next to the smart growth and sustainable growth, and all the efforts are subordinated to its needs. The inclusive growth is defined in the *Strategy* as supporting the economy with a high level of employment that guarantees social and territorial cohesion. The intended proof of achieving this goal would be reducing the scale of poverty (number of people living below the poverty threshold) through maximizing work activity and limiting structural unemployment, increasing social responsibility in the business area, providing help for children or anybody else who is financially dependent on another person, introducing the model of flexible labour market and flexicurity, providing people with opportunities to learn new skills in order to easily adjust to new circumstances or possible career changes, balancing the access to health services, as well as supporting healthy life style of the elderly (European Commission, 2010).

In Poland, a special role to play in ensuring social inclusion under the new national economic development strategy have regional and local governments (Ministry of Economic Development, 2017). To be able to pinpoint all the challenges that stand before the local governments and deal with social inclusion (through providing social services: education, health, social security) one must first and foremost diagnose the scale of social inclusion/exclusion. This will be the subject of the following part of the paper.

### **4. Research Methodology**

The essence of inclusive growth is broadly defined social inclusion. It is a multi-dimensional phenomenon. As mentioned above, it is indicated by: reduction of the unemployment rate, gender equality, providing access to infrastructure, social security, access to basic social services, good leadership and participation in social life. In the study on social inclusion, as in the study on other multidimensional phenomena, e.g. socio-economic development (Bařa, 2016), it is appropriate to apply methods of multidimensional comparative analysis.



The level of social inclusion in Poland was measured on the example of all 144 communes (regions NUTS 5) of Kujawsko-Pomorskie Voivodeship. Publicly available statistical data for 2009 and 2016 were used in the research (Local Data Bank [online]). There were 8 potential variables describing the level of social inclusion (table 1). X7 characterizes the level of unemployment. X1 characterizes the level of poverty. X2 characterizes the access to infrastructure. X4 and X5 describe the level of social security. X3, X6, X8 characterize access to the basic social services.

**Table 1: Potential Variables Describing the Level of Social Inclusion**

Symbol	Description
X1	Revenue of communes per capita, PLN
X2	Dwellings fitted with technical and sanitary installations (a bathroom), %
X3	Stationary social assistance centers per 1000 inhabitants
X4	Beneficiaries of social assistance at domicile, %
X5	Children up to the age of 17 for whom parents receive family benefit in the total number of children of this age
X6	Children under 3 years covered by nursery care, %
X7	Registered unemployed persons in the population of working age, %
X8	Children in pre-primary education establishments for 1000 children aged 3-5

Source: author's elaboration

A set of potential variables was reduced on the basis of variation coefficient which the threshold level equaled 10% and correlation coefficient which critical level was set at 0.7. Finally, a set of diagnostic variables for 2009 numbered 6 variables: X1, X3, X4, X6, X7, X8. For 2016 it was also X5. Three of them were destimulants (X4, X5, X7). They were transformed into stimulants using the differential method. The diagnostic variables have not been assigned different weighting factors. The next step of the procedure was normalization. Taking into account that the method of normalization influences the results of the research and its conclusions, normalization of diagnostic variables was done by using three formulas: standardization (1), unitarization (2) and normalization (3).

$$z_{ij} = \frac{x_{ij} - \bar{x}_j}{s_j}, \quad (1)$$

$$z_{ij} = \frac{x_{ij} - \min_i x_{ij}}{\max_i x_{ij} - \min_i x_{ij}}, \quad (2)$$

$$z_{ij} = \frac{x_{ij} - \bar{x}_j}{\bar{x}_j}, \quad (3)$$

where:  $z_{ij}$  – normalized value of the  $j$ -th variable for the  $i$ -th object,  $x_{ij}$  – value of  $j$ -th variable for  $i$ -th object,  $\bar{x}_j$  – arithmetic mean of variable  $x_j$ ,  $s_j$  – standard deviation of  $j$ -th variable.

The results of normalization were used to calculate six intermediate taxonomic indicators of social inclusion (three of them were calculated using the Hellwig method with Euclidean distance (4); another three were calculated using non-model method (5)).

$$d_i = 1 - \frac{c_{io}}{c_o}, \text{ where: } c_{io} = \left[ \sum_{j=1}^n (z_{ij} - z_{oj})^2 \right]^{\frac{1}{2}}, \quad c_o = \bar{c}_o + 2S_o, \quad \bar{c}_o = \frac{1}{m} \sum_{i=1}^m c_{io},$$

$$S_o = \left[ \frac{1}{m} \sum_{i=1}^m (c_{io} - \bar{c}_o)^2 \right]^{\frac{1}{2}}, \quad (4)$$

$$d_i = \frac{1}{m} \sum_{j=1}^m z_{ij}, \quad (5)$$

where:  $d_i$  – value of intermediate taxonomic indicators for  $i$ -th object,  $z_{ij}$  – normalized value of the  $j$ -th variable for the  $i$ -th object.

Six intermediate taxonomic indicators were used to calculate synthetic taxonomic measure of inclusiveness according to the formula:

$$D_i = \frac{1}{6} \sum_M d_i^{*M}, \quad (6)$$

where:  $d_i^{*M}$  – normalized value of intermediate taxonomic indicator of inclusiveness.

Synthetic taxonomic measure was used to rank communes according to their levels of social inclusion and group them into classes with similar levels of inclusiveness.

## 5. Results and Discussion

The number of communes in individual groups of communes was similar in both 2009 and 2016. In 2009, the group that was characterized by the highest social inclusion consisted of 16 communes, in the second class of communes in terms of the level of inclusiveness there were 38 communes, in the third one – 42, and in the fourth class, a group that was the least socially inclusive - 48. In 2016 in the first class there were 20 communes, in the second 34, in the third 47 and in the fourth 43. In 2009 the synthetic taxonomic measure of inclusiveness for the commune with the highest level of social inclusion accounted for 0.49387, and in 2016 equalled 0.5680. The synthetic taxonomic measure of inclusiveness for the commune with the lowest level of social inclusion was equalled to: 0.10281 in 2009 and 0.12503 in 2016. This shows that the communes of the analyzed region were characterized by a relatively low level of social inclusiveness (synthetic taxonomic measure could have a maximum value of 1), and the difference between the commune with the highest social inclusiveness and the lowest did not significantly change between 2009 and 2016. The most spectacular changes in terms of social inclusiveness during those two years happened in the Sępólno Krajeńskie commune (from 4th class in 2009 to 1st class in 2016) and Osie and Cekcyn communes (from 3rd class to 1st class). Such significant shifts of these communes in the ranking resulted from a relatively large increase in their budget revenues per capita, a decrease of the percentage of children under 17 years old, whose parents are granted family benefits, increased access to basic social services for residents (in all three communes significantly increased the percentage of children under 3 years covered by nursery care and the number of children aged 3-5 in pre-primary education) and the improvement of the situation on the local labour market reflected in the decrease in the share of registered unemployed in the working age population.

To identify the differences in the level of social inclusion in a given year and to determine whether these differences increased or decreased in the years 2009-2016, standard deviation and coefficient of variation were used. Both were calculated for synthetic taxonomic measure

of inclusiveness of the entire population of the analyzed communes, as well as for individual classes of communes (table 2).

**Table 2: Diversity of the Level of Social Inclusion in the Analyzed Communes in 2009 and 2016**

Groups of communes	2009			2016		
	$S(D_i)$	$\bar{x}$	$V(D_i)$	$S(D_i)$	$\bar{x}$	$V(D_i)$
All communes	0.18	0.40	0.443	0.16	0.46	0.351
1st class	0.17	0.61	0.279	0.13	0.61	0.218
2nd class	0.04	0.30	0.119	0.05	0.34	0.156
3rd class	0.02	0.22	0.093	0.03	0.21	0.144
4th class	0.04	0.13	0.310	0.05	0.10	0.448

Source: author's calculations

The standard deviation and coefficient of variation of the synthetic taxonomic measure of inclusiveness show that in 2016, in comparison to 2009, the level of social inclusiveness in the Kujawsko-Pomorskie Voivodeship has not changed in a significant way, and that the difference between the communes with the highest and the lowest levels of social inclusiveness decreased to a small extent. The most diverse group of communes in terms of inclusiveness was the 4th class consisting of communes with the smallest level of social inclusion. In this group of communes the disproportions in the level of social inclusiveness increased between 2009 and 2016. The 2nd and the 3rd class were the least diverse. The 1st class, consisting of the communes with the highest level of social inclusion, was the only one in which the disproportions in social inclusion had diminished between 2009 and 2016.

## 6. Conclusion

The condition for undertaking effective actions to increase the level of social inclusion in a given country or region is to determine the level of inclusion of its constituent parts and to identify differences existing between them. It is not an easy task due to the multi-dimensional nature of this phenomenon and the limited availability of statistical data describing it.

In this article, inclusive development is defined as a one that enables social inclusion, and therefore is associated with: reduction of unemployment, poverty and inequalities, the increase in employment efficiency, ensuring gender equality, ensuring access to infrastructure, social security, strong leadership, and participation in social life. The level of social inclusion was analyzed using the multidimensional comparative analysis methods. All of the communes of one Polish voivodeship were examined on the basis of statistical data for 2009 and 2016.

The results of the analysis indicate that the communes of this region are characterized by a low level of social inclusion. The synthetic taxonomic measure of inclusiveness for the commune with the highest level of social inclusion equalled 0.49387 in 2009 and 0.58680 in 2016, while its maximum value could amount to 1. Moreover, in the period from 2009 to 2016 there was a slight reduction in the diversity of the level of social inclusion in the region. The situation was the most unfavorable in the group of communes with the lowest level of social inclusion. It was the most diverse group in this respect, and the disproportions in the level of social inclusion in the period from 2009 to 2016 clearly increased here. A slight reduction in disproportions was visible only in the group of communes with the highest level of social inclusion.

The implementation of the idea of inclusive development in Poland is associated with many challenges. One of them is the measurement of the level of social inclusion in individual regions. While the availability of statistical data at the national or even regional level is good, there are problems at lower levels of public management. Meanwhile, it is at the local level that the implementation of the idea of inclusive development has the greatest sense and the greatest chance for effective implementation, because the issue of social inclusion/exclusion affects local communities. In addition, at the local level there is a real possibility of establishing a community of goals for the implementation of a specific idea.

In Poland, an important challenge associated with the implementation of the idea of inclusive development, and thus with the implementation of the Europe 2020 Strategy, is the lack of significant progress in improving the level of social inclusion. In the article, the analysis of the level of social inclusion has been made for one region, but the situation in other Polish regions, most of which are still regions lagging behind, looks similar. The example of the Kujawsko-Pomorskie Voivodeship shows that during almost eight years of implementing the Europe 2020 Strategy, the level of social inclusion in Poland has not improved noticeably, and the diversification of the level of social inclusion between individual communes has not significantly decreased. There are examples of communes where the level of social inclusion has improved spectacularly, but these are individual cases.

Inclusive growth is a particular challenge for regions lagging behind. Overcoming the distance that separates them from the goals set in the Europe 2020 Strategy requires increased efforts of public authorities in the region and mobilizing financial resources. It also requires involvement in the initiation, implementation and evaluation of development activities of local communities, which are often characterized by a lack of responsibility for the region that they live in, and a lack of willingness to engage in public affairs. Overcoming these barriers may prove to be crucial for the implementation of the idea of inclusive development in Poland.

## References

- [1] Atkinson, A.B. (2017). *Nierówności. Co da się zrobić?* Warszawa: Wydawnictwo Krytyki Politycznej.
- [2] Bąba, W. (2016). Changes in Level of Socio-Economic Development of EU Member Countries in the 2004-2013 Period – Taxonomic Analysis. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 37-45.
- [3] European Commission (2010). *A European strategy for smart, sustainable and inclusive growth* [online]. [cit.2018-02-20]. Available at: <http://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007%20-%20Europe%202020%20-%20EN%20version.pdf>.
- [4] G20 (2017). *Hamburg Update: Taking forward the G20 Action Plan on the 2030 Agenda for Sustainable Development* [online]. [cit. 2018-02-20]. Available at: [https://www.g20.org/Content/DE/\\_Anlagen/G7\\_G20/2016-09-08-g20-agenda-action-plan.pdf?blob=publicationFile&v=1](https://www.g20.org/Content/DE/_Anlagen/G7_G20/2016-09-08-g20-agenda-action-plan.pdf?blob=publicationFile&v=1).
- [5] Grosse, M., Harttgen, K., Klasen, S. (2008). Measuring Pro-Poor Growth in Non-Income Dimensions. *World Development*, vol. 36, no. 6, pp. 1021-1047.
- [6] Ianchovichina, E., Lundstrom, S. (2009). Inclusive Growth Analytics. Framework and Application, *Policy Research Working Paper* No. 4851. The World Bank, March.

- [7] International Monetary Fund, Organization for Economic Co-operation and Development, United Nations, World Bank Group (2000), *A Better World For All*, Washington, Paris, New York.
- [8] Kakwani, N., Pernia, E. (2000), What is Pro-poor Growth? *Asian Development Review: Studies of Asian and Pacific Economic Issues*, vol. 18, no. 1, pp. 1-16.
- [9] Kakwani, N., Silber, J. (2008). Introduction: Multidimensional Poverty Analysis: Conceptual Issues, Empirical Illustrations and Policy Implications, *World Development*, vol. 36, no. 6, pp. 987-991.
- [10] Klasen, S. (2010). Measuring and Monitoring Inclusive Growth: Multiple Definitions, Open Questions, and Some Constructive Proposals, *ADB Sustainable Development Working Paper Series no. 12*.
- [11] Local Data Bank. *Statistics* [online]. [cit.2018-02-22]. Available at: <https://bdl.stat.gov.pl/BDL/start>.
- [12] McKinley, T. (2010), Inclusive Growth Criteria and Indicators: An Inclusive Growth Index for Diagnosis of Country Progress, *ADB Sustainable Development Working Paper Series, No. 14*.
- [13] Ministry of Economic Development (2017). *Strategy for responsible development* [online]. [cit.2018-02-20]. Available at: <https://www.mr.gov.pl/media/42169/SOR072017.pdf>.
- [14] OECD (2001). *The DAC Guidelines. Poverty Reduction*. Paris: OECD Publications Service.
- [15] Piketty, T. (2015). *Ekonomia nierówności*, Warszawa: Wydawnictwo Krytyki Politycznej.
- [16] Ranieri, R., Almeida Ramos, R. (2013). Inclusive growth: Building up a concept, *Working Paper No. 104*, International Policy Centre for Inclusive Growth.
- [17] Rauniyar, G., Kanbur, R. (2010). *Inclusive Development: Two Papers on Conceptualization, Application, and the ADB Perspective*. Mandaluyong City, Philippines: Asian Development Bank.
- [18] Ravallion, M., Chen, S. (2003). Measuring Pro-poor Growth, *Economics Letters*, vol. 78, issue 1, pp. 93-99.
- [19] Stiglitz, J.E. (2013). *The price of inequality: How today's divided society endangers our future*. New York – London: W.W. Norton & Company.
- [20] United Nations Development Programme (2016). *Human Development Report 2016. Human Development for Everyone*, New York: United Nations Development Programme.
- [21] White, H., Anderson, E. (2001). Growth versus Distribution: Does the Pattern of Growth Matter? *Development Policy Review*, vol. 19, issue 3, pp. 267-289.
- [22] White, W.R. (2012). Policy Debate: How do you make growth more inclusive? In de Mello, L., Dutz, M.A. (eds.), *Promoting Inclusive Growth: Challenges and Policies*. Paris: OECD Publishing, pp. 279-283.

## **Risk Assessment of SMEs under Engaging in Cluster Cooperation in Terms of their Territorial Impact in Slovakia Within the EU Context**

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### **Abstract**

*Small and medium-sized enterprises represent an important element of innovation driving force in developed economy and are a crucial element in European Union economy. They are considered to be the guarantor of stability and social cohesion, play an important role in innovation implementation and contribute to technological progress advancement in society. Small and medium-sized enterprises are equally important and are the most numerous stakeholders in headmost clusters in Slovak Republic and EU Member States. An inseparable part of SME business is a risk. The issue of SME risk management has been developed in different ways, but the focus on clustering is still missing. The main objective of this paper is to assess the risks that SMEs are considering within their involvement in cluster cooperation in terms of their territorial impact in Slovak Republic within the EU context. To accomplish the goal, the results of a questionnaire survey, being assessed by chi-square method, have been used.*

**Keywords:** cluster cooperation, EU innovation policy, regional policy, risk management, world economy development

**JEL Classification:** F29, L26, L53

### **1. Introduction**

In the process of globalization, small and medium-sized enterprises may lose a step, compared to large multinational companies, and thus it can often be advantageous for them to joint with other companies or institutions to increase their competitiveness. This engagement has gained particular popularity nowadays. In global competitive environment just the most competitive firms are beneficial in the long run. The competitiveness of companies is determined also by the ability to innovate their products, technologies or services. In this respect, small and medium-sized firms with insufficient sources and innovative capacities are handicapped. Therefore, networking and strategic partnerships are now an important prerequisite for companies' development, especially SMEs. Haviernikova (2016) argues that network organizations are more effective, more flexible, and more resilient to external influences than hierarchical ones. Their development factors appear to be not only the transfer of knowledge and information, intense communication, but also the process of permanent learning to each other.

Global economic environment, which also includes the economy of European Union, is characterized, among other things, by a wide range of heterogeneous risks. In economy only rarely it can be found a risk-free environment, i.e. an environment in which only the necessary

and desirable dependencies of phenomenon are carried out and the results which can be unambiguously expected (Zemanova and Drulakova 2016; European Commission, [online] 20187). However an increasing dependency among countries, regions and businesses, has many negative effects. Along with new technologies and knowledge being spread throughout the world, conditions for their abuse are being created; the impact of various crisis phenomena in world economy is being multiplied negatively. To eliminate the consequences of crisis events in particular economy is possible only in case of internal and external stability. According to Fojtikova (2016) to reduce inflationary pressures and achieve sustainable economic growth in economic and financial spheres can contribute to the economic performance improvement of EU member states.

The capacity of crisis management extends to all areas of social life and human activities, but it is also much focused on environment and risky technical facilities and technological processes. Vojtovic (2016) states that the capability of crisis management is closely interlinked with its basic tools being used to address the emergencies and crisis situations. Basic crisis management tools and various specific procedures make it possible to reduce the likelihood of crisis occurrences but also to handle them with the least damage and loss. It is possible to prevent the crisis phenomenon, to reduce their likely negative impacts on society and subsequently to handle them by using the prevention of crisis phenomena and its negative consequences as well as effective response to the emerging crisis phenomena.

This paper deals with assessing the risks that SMEs are considering within their involvement in cluster cooperation in terms of their territorial impact in Slovak Republic within the EU context. To accomplish the goal, the results of a questionnaire survey, being assessed by chi-square method, have been used.

## **2. Theoretical Background & Literature Overview**

The cluster concept represents a new direction in economic thinking. Jovanović (2014) consider clustering to be a higher form of networking, bringing together the interests of the state, public and private spheres. Already existing horizontal level networks have the possibility to link up to the vertical level in order to achieve a higher added value of their activity with a demonstrably positive impact on the development of regions. In principle, there are two types of clusters (Haviernikova and Strunz, 2014; Hitiris, 2003). The first one is so-called cluster based on the value chain made up of companies in the supply-chain of a final producer. A classic example is the automotive industry where a large number of supply companies are connected to the final manufacturer. The second type is the competence-based cluster, oriented rather to the application of specific solutions. A good example can be the IT technology sector.

From a practical point of view, it is necessary to distinguish between clusters and cluster initiatives, being defined as organized efforts by governments or firms to increase the clusters' growth and competitiveness. According to Jovanović (2014) cluster initiatives typically include three types of actors: cluster firms, governments and research organizations. Cluster initiatives are run by specialized institutions known as cluster organizations, ranging from non-profit organizations, through public agencies to private companies. It is now accepted that cluster organizations are important for the development of clusters.

Cluster organizations can also be defined as organized efforts to promote the growth and competitiveness of clusters in regions, and they include: different member organizations (four main types of actors: private industry, public organizations, academic and public-private, and non-profit organizations); cluster organization with office, cluster manager, website, etc.;

initiative management; initiative financing (national / regional / local public funding, membership fees, consulting, etc.) (Haviernikova. et al, 2016). Cluster organizations play an important role as a cluster support provider, acting not only in less developed regions but also in developing and developed countries (Baculakova and Harakalova, 2017). This means that the institutionalized form of clusters are to be cluster organizations being formed by engaging of enterprises and other relevant entities „around“ an ad hoc institution that meets the goal of central coordinating point. In this case there is no problem with cluster identification being clearly delineated by the membership in central coordinating point - the cluster organization (Tausser and Cajka, 2014).

Crisis management is defined as a sum of the activities of relevant institutions for the security risks and threats analysis, risk factors monitoring, crisis situations prevention, and for planning, organization, implementation and control of activities being designed to create the conditions for crisis situations solving. A business crisis is a state of an enterprise's integrity breach, or its interdependence with external environment, which in turn causes changes in the balance of business objectives and functions (Vojtovic, 2016). It is, therefore, a disturbance of company's balance which threatens to meet the company's objectives. On one hand a business crisis can be induced deliberately in order to gain and benefit for one's own business, or harm competition, on the other hand, unintentionally, by external and internal determinants. Dano (2014) urges that the balance of business processes can be disrupted due to disproportions between the society and corporate goals when the enterprise does not respect all-society needs and its products are not able to be sold. Disproportion between economic performance and social requirements may cause the lost regarding the company's ability to meet its financial obligations. Last but not least, the disproportion among producers, sellers and consumers may undermine the stability between supply and demand (Hamilton and Wepster, 2009).

Determinants of business crises depend on external as well as internal environment. Among the determinants of external environment can be added: international political environment (economic crises, economic sanctions), economic and financial environment (the ability of companies to pay), market environment (market protection by government, the purchasing power of population), legal, ethical and social environment (entrepreneurship support) and natural environment (Hitiris, 2003). On the other hand, the determinants of internal environment are strategies and tactics of corporate management, qualification level of employees, labor and technological discipline, labor productivity, production technology and so on (Okreglicka and Mynarzova and Kana, 2015).

Business crises can selectively affect different business and business segments, but they can also have a complex character and modify all aspects of company's life. The causes of corporate crises are very diverse, and they can be divided into two basic groups as internal and external causes (Mura and Sleziak. 2015; Lipkova, 2012; Delgadova et al, 2017). Within Slovakia, among internal causes, we can include, for example, lack of equity, unclear direction, low share of final production and market production program, mistakes in business activities (e.g. sale to insolvent or unknown customers), deliberate mistakes and enrichment of top executives, key employees loss, competition, risky business, the inability of top management to respond to environmental changes, little flexibility to predict and respond to market and price changes and others. The external causes of business crises include, for example, problems related to industry restructuring, formal industry revitalization, legal deficiencies in business sector, interest rate and wage growth, lack of credit (inappropriate credit conditions), customer insolvency, rising energy input prices, the entry of cheaper production from abroad into our market, gradual cancellation of governmental subsidies, negative impacts of military conflicts and international political instability, economic sanctions and embargoes, and others.



### 3. Problem Formulation and Methodology

The paper is part of results of scientific project VEGA 1/0918/16 Risk management of SMEs in the context of clusters' involvement activities in the Slovak Republic. In the frame of this project the pilot testing of questionnaire surveys were realized from July 2016 till January 2017 that was focused on identification of the small and medium-sized entrepreneurs' view on the risks associated with involvement into the clusters. The questionnaire surveys were realized among 123 small and medium sized entrepreneurs from two areas in which the Slovak clusters operate: technological and tourism. The research was executed over whole Slovakia, each region was presented. The definition of cluster cooperation was presented in questionnaire form to be clearly understood by each respondent. After making sure that the respondents are familiar with cluster cooperation issue, the authors try to establish the risk level in 25 different areas of business activity in the case it would be carried out within cluster cooperation (potential situation). The scale from 0-not applicable and 1-very low risk to 5-very high risk was applied.

For the processing of questionnaires the commonly used test for testing relationships between categorical variables - the Chi-Square test ( $\chi^2$ ) was used. Chi-Square test was used for verifying of null hypothesis (H0) about no association between two nominal variables.

Observed counts ( $f_{b_n}$ ) are compared to expected counts ( $f_{e_n}$ ).

Test statistic

$$\chi^2 = \sum_{i=1}^m \sum_{j=1}^n \frac{(f_{b_n} - f_{e_n})^2}{f_{e_n}} \quad (1)$$

In this paper we used the  $\chi^2$  statistic for ascertaining whether an association exists between the type of risks and enterprise's operating in terms of its localization.

By this test statistic we test null hypotheses H0 about no association against H1 about association between type of risk and placement of enterprise (local, regional, EU). A large size of the  $\chi^2$  statistic indicates that the observed data are unlikely under an assumption of no association between risk factors and enterprise' activities placement. The low level of p value  $< 0,05$  means that the H0 is rejected and we accept the alternative hypothesis H1, that between type of risk factor and placement of SME's activities an association is present. Large probability (p-value  $> 0,05$ ) means that the H0 is not rejected. It means that between type of risk and placement of SME's activities is not association.

### 4. Problem Solution and Results

The basic structure of respondents presents table 1. The most respondents belong to category of enterprises that employ less than 10 employees (68,29%) and operate in area of EU territory (47,15%).

**Table 1: Structure of Respondents**

Sized categorization	Local	Regional	EU	Total
less than 10 employees	31	22	31	<b>84</b>
from 10 to 49 employees	3	7	17	<b>27</b>
from 50 to 249 employees	0	2	10	<b>12</b>
<b>Total</b>	<b>34</b>	<b>31</b>	<b>58</b>	<b>123</b>

Source: author's research elaboration and calculations

The respondents assessed 25 risks' areas that SMEs are considering when join the cluster cooperation. The basic statistic characteristic of respondents' answers are presenting in the table 2

**Table 2: The Mean Assessment of Cluster Cooperation Risks by SME's Activities Location**

Risks	Local		Regional		EU	
	Mean	St. dev.	Mean	St. dev.	Mean	St. dev.
<b>1. Economic development</b>	2.00	1.35	2.61	1.41	2.36	1.41
<b>2. Market trends</b>	2.62	1.37	2.68	1.40	2.52	1.45
<b>3. Industry</b>	2.44	1.42	2.58	1.39	2.62	1.42
<b>4. Competition</b>	3.26	1.54	3.55	1.43	3.43	1.37
<b>5. Partners</b>	2.50	1.46	3.06	1.26	2.97	1.44
<b>6. Market area</b>	2.44	1.44	3.03	1.22	2.62	1.36
<b>7. Political risks</b>	1.44	1.37	2.16	1.42	1.72	1.52
<b>8. Legislative risks</b>	2.35	1.57	2.71	1.40	2.41	1.62
<b>9. Taxation</b>	2.74	1.19	3.42	1.12	2.83	1.45
<b>10. Company location</b>	2.62	1.48	2.77	1.56	2.47	1.34
<b>11. Infrastructure</b>	2.09	1.38	2.90	1.56	2.47	1.43
<b>12. Raw materials availability</b>	2.29	1.59	2.29	1.70	1.81	1.64
<b>13. Transport and Storage</b>	2.12	1.59	2.52	1.61	2.21	1.72
<b>14. Retail space</b>	2.09	1.52	2.39	1.48	2.14	1.53
<b>15. Machinery and equipment</b>	2.26	1.71	3.06	1.50	2.55	1.71
<b>16. Energy supply</b>	1.97	1.45	2.52	1.46	2.17	1.56
<b>17. Research &amp; Development</b>	1.76	1.56	1.77	1.41	1.91	1.61
<b>18. Production</b>	2.21	1.61	2.55	1.43	2.14	1.57
<b>19. Quality</b>	2.82	1.62	3.42	1.39	3.03	1.63
<b>20. The life cycle of an enterprise</b>	2.29	1.45	2.90	1.22	2.31	1.45
<b>21. Competence</b>	2.62	1.76	3.19	1.51	2.97	1.39
<b>22. Personal risks</b>	2.38	1.44	2.84	1.42	2.78	1.33
<b>23. Slow sown of enterprise's economic development dynamic</b>	2.24	1.18	2.71	1.27	2.83	1.38
<b>24. Cluster production</b>	2.32	1.43	3.06	1.29	2.59	1.51
<b>25. Outflow of own customers</b>	3.21	1.47	3.39	1.48	3.64	1.36

Notes: Min. 0,00; Max. 5,00 (scale: 0-not applicable, 1-very low risk, ..., 5 – very high risk)

Source: author's research elaboration and calculations

In general, it could be noticed that the potential risks of cluster cooperation was assessed higher by SMEs with regional operation. The highest risk areas for cluster cooperation were observed:

- Among SMEs operate in local area: competition and outflow of own costumers.
- Among SMEs operate in regional area: competition, partners, market area, taxation, Machinery and equipment, quality, competence, cluster production and outflow of own costumers.
- Among SMEs operate in EU area: competition and outflow of own costumers

The risk related with competition and outflow of own costumers were assessed by all SMEs as most risky. In the next step, the calculation of test statistic was calculated. The statistical analysis of the two hypothesis was realized:

H0: between type of risks and SME's activities placement is no association.

H1: between type of risks and SME's activities placement an association is present.

Due to the rules of Chi- Square test according which the expected variables must be higher than value 5 in 80% of cases, it was necessary to group the obtaining results of questionnaire surveys. The respondents' answers of value 1 – very low risk was grouped with value 2 – low risk and answers with value 5 – very high risk were grouped with value 4 –high risk. The results of Chi - Square statistics are presented in table 3.

**Table 3: Results of Chi-Square test**

<b>Risks</b>	<b>Results of chi sq. statistics</b>
<b>1. Economic development</b>	Person chi-sq.: 12,2269, df=6, p=,057105
<b>2. Market trends</b>	Person chi-sq.: 2,91032, df=6, p=,820014
<b>3. Industry</b>	Person chi-sq.: 3,39835, df=6, p=,757440
<b>4. Competition</b>	Person chi-sq.: 9,99212, df=6, p=,124997
<b>5. Partners</b>	Person chi-sq.: 3,54099, df=6, p=,738508
<b>6. Market area</b>	Person chi-sq.: 3,77224, df=6, p=,707465
<b>7. Political risks</b>	Person chi-sq.: 5,42719, df=6, p=,490305
<b>8. Legislative risks</b>	Person chi-sq.: 12,2954, df=6, p=,055705
<b>9. Taxation</b>	Person chi-sq.: 8,29605, df=6, p=,217218
<b>10. Company location</b>	Person chi-sq.: 3,99114, df=6, p=,677875
<b>11. Infrastructure</b>	Person chi-sq.: 7,68214, df=6, p=,262339
<b>12. Raw materials availability</b>	Person chi-sq.: 5,15581, df=6, p=,523995
<b>13. Transport and Storage</b>	Person chi-sq.: 2,13721, df=6, p=,906655
<b>14. Retail space</b>	Person chi-sq.: 6,28761, df=6, p=,391762
<b>15. Machinery and equipment</b>	Person chi-sq.: 2,80542, df=6, p=,832840
<b>16. Energy supply</b>	Person chi-sq.: 2,70776, df=6, p=,844528
<b>17. Research &amp; Development</b>	Person chi-sq.: 5,17169, df=6, p=,521993
<b>18. Production</b>	Person chi-sq.: 1,75026, df=6, p=,941174
<b>19. Quality</b>	Person chi-sq.: 5,40302, df=6, p=,493259
<b>20. The life cycle of an enterprise</b>	Person chi-sq.: 5,77270, df=6, p=,449134
<b>21. Competence</b>	Person chi-sq.: 7,20754, df=6, p=,302090
<b>22. Personal risks</b>	Person chi-sq.: 5,12081, df=6, p=,528418
<b>23. Slow sown of enterprise's economic development dynamic</b>	Person chi-sq.: 7,11981, df=6, p=,309919
<b>24. Cluster production</b>	Person chi-sq.: 6,65636, df=6, p=,353807
<b>25. Outflow of own customers</b>	Person chi-sq.: 8,51739, df=6, p=,202606

Source: author's research elaboration and calculations

The obtaining results showed that between type of risk and placement of SME's activities is not association. It means that H0 has not been rejected.

## 5. Conclusion

Up till now in Slovakia, there is no comprehensive system to support the emergence and development of technology clusters and cluster organizations. The current status represents a barrier for development of cluster, and hence individual companies, sectors and regions. This fact is highlighted by the fact that many member firms of cluster organizations are small and medium-sized enterprises (SMEs), which generally have many specifics. One of important ones is the fact that many SMEs are often inadequately innovative, or having a problem to convert the results of their activities into practical commercially successful innovations. The current situation also does not allow the development of promising industries with great innovation potential.

The development of Slovak clusters must be seen from the point of view of an enterprise development, but also in the context of events ongoing within the EU. It is necessary to create conditions for clusters development so that they are able to compete in global conditions but also to use the forthcoming European instruments and initiatives aimed at promoting the internationalization and export and the emergence of European meta-clusters. Slovak Republic is not much left behind by other European Union countries. Clusters of regional as well as supra-regional nature are emerging and align their activities with regional strategies in order to increase competitiveness and economic growth of particular regions. The role of clusters is not easy considering the economy's development. Their main task is to strengthen the economic development of regions in all types of capital. This underpins the need to implement a comprehensive support approach in Slovak Republic, which will help domestic clusters and their members to increase their competitiveness and create conditions for the involvement of cluster organizations in international networks and programs. It is necessary that the interest to build up clusters as a regional development tool would be met positively not only with the vertical level actors, but also regional policy actors should be involved in the process of regional strategy development. As research limitations can be mentioned issues such as pilot research to bigger project, all regions in Slovakia necessary to be covered, research sample a bit difficult to set.

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## References

- [1] Baculakova, K. and Harakalova, L. (2017). Creative industries in the EU: factors influencing employment. *Economic Annals-XXI*, vol. 64, iss. 3-4, pp. 40-44. DOI: 10.21003/ea.V164-09
- [2] Delgadova, E. and Gullerova, M. and Ivanova, E. (2017). Recruitment and selection processes in Slovak enterprises and multinational corporations. *International Journal of Organizational Leadership*, vol. 6, iss. 2, pp. 211-220. DOI: 10.19236/IJOL.2017.02.06
- [3] Fojtikova, L. (2016). Trends in the revealed comparative advantages of the EU member states. *Economic Annals-XXI*, vol. 161, iss. 9-10, pp. 7-11. DOI: 10.21003/ea.V161-02

- [4] Hamilton, L. and Wepster, Ph. (2009). *The International Business Environment*. New York : Oxford University Press.
- [5] Haviernikova, K. and Jaskova, D. and Krajnakova, E. (2016). The Evaluation of Regional Competitiveness in the Context of Cluster Potential. In *Proceedings of the 3rd International Conference on European Integration 2016 (ICEI 2016)*, pp. 326-334.
- [6] Haviernikova, K. (2016). The Identification and Classification of Risks in terms of Cluster Cooperation. In *Proceedings of the 1st International Conference Contemporary Issues in Theory and Practice of Management: CITPM 2016*, pp. 130-136.
- [7] Haviernikova, K. and Strunz, H. (2014). The Comparison of Selected Methods Used for Identification of Cluster Potential in the Regions of the Slovak Republic. In *Political Sciences, Law, Finance, Economics And Tourism, Vol IV, Book Series: International Multidisciplinary Scientific Conferences on Social Sciences and Arts (SGEM 2014)*, pp. 693-700.
- [8] Hitiris, T. (2003). *European Union Economics. 5th edition*. London: Prentice Hall.
- [9] Jovanović, M. N. (2014). *The Economics of European Integration*. UK, USA: Edward Elgar Publishing Ltd.
- [10] Lipkova, L. (2012). Innovation Policy of the European Union. In *Proceedings of the 1st International Conference on European Integration 2012, ICEI 2012*, pp. 171-178.
- [11] Mura, L. and Sleziak, J. (2015). Innovation and Entrepreneurship Network. In *CERS 2014: 5th Central European Conference In Regional Science, International Conference Proceedings*, pp. 643-651.
- [12] Okreglicka, M. and Mynarzova, M. and Kana, R (2015). Business Process Maturity in Small and Medium sized Enterprises. *Polish Journal of Management Studies*, vol. 12, iss.1, pp. 121-131.
- [13] Dano, F. (2014). Selected Methods for Improving Effectiveness of Distribution Activities. In *Proceedings of the 5th International Scientific Conference on Trade, International Business and Tourism: Application of Knowledge in Process of Business Dynamization in Central Europe*, pp. 55-61.
- [14] Tauser, J. and Cajka, R. (2014). Hedging techniques in commodity risk management. *Agricultural Economics-Zemедelska Ekonomika*, vol. 60, iss. 4, pp. 174-182.
- [15] Vojtovic, S. (2016). The Impact of The Structural Funds on Competitiveness of Small and Medium-Sized Enterprises. *Journal of Competitiveness*, vol. 8, iss. 4, pp. 30-45. DOI: 10.7441/joc.2016.04.02
- [16] Zemanova, S. and Drulakova, R. (2016). Making Global Goals Local Business in V4 Countries: V4 Entrepreneurs and the UN Global Compact. In *Globalization and its Socio-Economic Consequences, 16th International Scientific Conference Proceedings, PTS I-V*, pp. 2490-2497.
- [17] European Commission (2018). [online]. [cit.2018-02-18]. Retrieved from: [http://ec.europa.eu/enterprise/policies/innovation/policy/innovation-union/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/policy/innovation-union/index_en.htm).

## The Role of Innovation in EU Regional Policy Within its Implication in the Conditions of Slovak Republic

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### Abstract

*Innovation is an important improvement and development element in all areas of economic and social life, business environment as well as regional processes. EU Regional policy has a significant impact on many areas of economic and social life throughout the European Union. By means of analysis, comparative analysis methods followed by logical deduction the main goal of this paper is to figure out how and in what way the technology and innovation implementation processes in EU Regional policy can affect the sustainable economic growth in terms of the conditions of Slovak Republic to assure sustainable economic growth in Slovak regions and enhance the Slovak competitiveness within the European economy environment. Slovak regional and innovation policies are acting as a main synergic issue coming out of EU innovation and regional policies interaction. Their parallel collaboration and positive effects have significant fallouts on regional development and limiting the regional discrepancies in Slovak regions.*

**Keywords:** *European economy, regional competitiveness enhancement, regional discrepancies, technology and innovation*

**JEL Classification:** *F63, F68, O38*

## 1. Introduction and Theoretical Background

Generally understood, in current economic complex of European Union innovation plays an increasing role in European economy. The most basic definitions of innovation suggest that it is a change or novelty induced by human creativity (Brakman, 2006). Balaz (2014) argues that it provides benefits not only for citizens as both consumers and workers but also for regional development. It accelerates and improves the design, development, production and use of new products, industrial processes and services especially in backward regions to start up their development and to catch up with other more developed regions within the European Union states (Hamilton and Wepster, 2009; Reinert, 2012). Undoubtedly it is essential to creating better jobs, building a greener society and improving the quality of life, but also to maintaining EU competitiveness in the global market (Vojtovic, 2016). Hitiris (2003) argues that the role of innovation is to turn research results into new and better services and products in order to remain competitive in the global marketplace and improve the quality of life of Europe's citizens. Innovation policy is the interface between research and technological development policy and industrial policy and aims to create a conducive framework for bringing ideas to market and also into regions. The importance of innovation policy is widely recognized within the EU. It is also strongly linked to other EU policies, such as those on employment, competitiveness, environment, industry and energy but especially to EU Regional policy.

Regarding the world economy situation Europe spends 0.8% of GDP less than the US and 1.5% less than Japan every year on research and development (R&D) (Balaz, 2013); Obadi and Korcek, 2016). Although the EU market is the largest in the world, it remains fragmented and is not sufficiently innovation-friendly. With a view to changing these trends, the EU has developed the concept of an Innovation Union. This unique program has several issues to be executed. According to European Commission (2017) it aims to make Europe a world-class science performer, then to remove obstacles to innovation like expensive patenting, market fragmentation, slow standard-setting and skills shortages which currently prevent ideas getting quickly to market and finally to revolutionize the way the public and private sectors work together, notably through the implementation of Innovation Partnerships between the European institutions, national and regional authorities and business (Taušer and Arltová and Žamborský, 2015; Drulák and Druláková, 2014). The Innovation Union aims to create a genuine single European market for innovation, which would attract innovative companies and businesses. The Innovation Union is a crucial investment in EU portfolio. For example, achieving our target of investing 3% of EU GDP in R&D by 2020 could create 3.7 million jobs and increase annual GDP by EUR 795 billion by 2025 (Eurostat Press Office [online], 2017).

To make those targets work and being executed successfully several instruments have been introduced to measure and monitor the situation across the EU and the progress being made. In terms of regional development the most significant one is a Regional Innovation Scoreboard (RIS), which classifies European regions into four innovation performance groups, similarly to the Innovation Union Scoreboard. There are 41 regions in the first group of innovation leaders, 58 regions in the second group of innovation followers, 39 regions are moderate innovators and 52 regions are in the fourth group of modest innovators (Mynarzova and Sverkova, 2015). It provides a more accurate mapping of innovation at local level.

Within the implementation of innovation policy into regional development scenario the effective financial mechanism is very necessary to be set up. As a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness, Horizon 2020 is the financial instrument which provides for the implementation of the Innovation Union (Lipkova, 2013; Cihelková and Hnát, 2008). This new program for research and innovation is part of the drive to create new growth and jobs in Europe, and combines all the research and innovation funding currently provided through the Framework Programs for Research and Technological Development, the innovation-related activities of the Competitiveness and Innovation Framework Program (CIP) and the European Institute of Innovation and Technology (EIT). By introducing a single set of rules, Horizon 2020 provides major simplification and addresses challenges in society by helping to bridge the gap between research and the market, for example by helping innovative enterprises to develop their technological breakthroughs into viable products with real commercial potential. Many authors such as Jovanović (2005), Baldwin and Wyplosz (2009), Lipkova (2012) state that small and medium size companies (SMEs) play a very important role as an intermediary between regional and innovation policy and they appear as a very important tool how innovation is implemented into regional policy and they create an environment how these policies are working in harmony together. There is also a unique program called Fast Track to Innovation (FTI) being designed to significantly speed up the time from idea to placement on the market and is expected to increase participation in Horizon 2020 and the number of first-time applicants. Finally the Structural policy tool focuses more on research and innovation. In more developed regions at least 80% of resources from the European Regional Development Fund at national level are allocated to innovation, with the priorities being a low-carbon economy and competitive SMEs while the corresponding share in less developed regions is 50% (Taušer and Čajka 2014).

The significant issue of EU Regional policy is that it appears to be the vehicle for delivering regional aid. European concern for the less developed regions has always been the main objective of the European Union (Jovanović, 2005). The aim of the European regional policy is to contribute to the development of backward regions in particular, the restructuring of declining industrial areas, and revitalization of deprived neighbourhoods. The emphasis is focused on creating sustainable jobs and improving the economic, social and territorial cohesion of the Union. The main important tool how EU Regional policy is being executed is structural funding mechanism system. Regional Policy is delivered through three main funds such as European Regional Development Fund (ERDF), Cohesion fund (CF) and European Social Fund. Together with the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF), they make up the European Structural and Investment (ESI) Funds. The most important tool effectively enhancing and combining the regional and innovation aspects appears to be the European Regional Development Fund that aims to strengthen economic and social cohesion in the European Union by correcting imbalances between its regions. It focuses its investments on several key priority areas known as thematic concentration, namely innovation and research; digital agenda; support for small and medium-sized enterprises; and low-carbon economy. Resources allocated to these priorities will depend on the category of region. In more developed regions, at least 80 % of funds must focus on at least two of these priorities. In transition regions, this focus is for 60 % of the funds and 50 % in less developed regions (European Commission [online], 2017). The European Regional Development Fund also gives particular attention to specific territorial characteristics. ERDF action is designed to reduce economic, environmental and social problems in urban areas, with a special focus on sustainable urban development. At least five percent of ERDF resources are set aside for this field, through integrated actions managed by cities (Mitchel and Muysken and Van Veen, 2006). Areas being naturally disadvantaged from a geographical viewpoint (remote, mountainous or sparsely populated areas) benefit from special treatment. Lastly, the outermost areas also benefit from specific assistance from the European Regional Development Fund to address possible disadvantages due to their remoteness.

This study dealing with the role of Innovation in EU Regional policy within its implication in the conditions of Slovak Republic is supposed to be a follow up to the pervious researches which analyzed similar issues but from different perspectives and approaches.

## **2. Problem Formulation and Methodology**

This paper will discuss how the EU Innovation policy is implemented into EU Regional policy, how important role it plays within their synergies to assure sustainable economic growth in Slovak Republic and enhance its competitiveness within the European economy environment highlighting the impact of EU innovation strategy and EU Regional policy on Slovak regional development and regional discrepancies issue in the period of 2014-2020. By means of analysis, comparative analysis methods followed by logical deduction the main goal of this paper is to figure out how and in what way the European Regional and Innovation policies are affecting the execution of Slovak regional and innovation practices implementation processes in order to enhance and reinforce the sustainable economic growth and to reduce the fallouts of deepening the regional discrepancies process in Slovak Republic.



### 3. Findings and Discussion

Regarding the research outputs of this particular study following issues are to be analyzed and discussed. Firstly, regional policy and EU Commission's priorities being reflected into the Slovak regional policy environment underlining its success stories; secondly, the Slovak Innovation and Energy Agency is to be illustrated as a main subject combining and implementing the regional and innovation issues into an effective cooperation and synergies and lastly, the Innovation policy of Slovak Republic within the research and development background and current priorities being observed.

Regional Policy has a strong impact in many fields. Its investments help to deliver many EU policy objectives and complements EU policies such as those dealing with education, employment, energy, the environment, the single market, research and innovation. The European Structural and Investment Funds are directly contributing to the Investment Plan and the Commission's priorities. Regional Policy provides the necessary investment framework to meet the goals of the Europe 2020 Strategy for smart, sustainable and inclusive growth in the European Union. According to European Commission [online] (2017) the five targets for the EU in 2020 are as follows. Firstly it is employment with its goal 75 % of the 20-64 year-olds to be employed; secondly the research & development areas aiming at 3% of the EU's GDP to be invested in research and development; thirdly it is the climate change and energy sustainability (greenhouse gas emissions -20 % (base year 1990) - 20% of energy from renewable sources and 20 % increase of energy efficiency); fourthly, education - reducing the rates of early school leavers below 10% and at least 20 million fewer people in or at risk of poverty and social exclusion; and finally the fighting poverty and social exclusion - at least 20 million fewer people in or at risk of poverty and social exclusion.

Each Member State has adopted its own national targets in these areas. According to data from the Eurostat [online] (2017) the targets for Slovak Republic in 2020 are as follows. Employment: 72 % of the 20-64 year-olds to be employed. Research & Development: 1 % of the GDP to be invested in research and development. Climate change and energy sustainability (greenhouse gas emissions -13 % (base year 2005), 14 % of energy from renewable sources. Education - reducing the rates of early school leavers below 6 % and at least 20 million fewer people in or at risk of poverty and social exclusion. Fighting poverty and social exclusion with the goal 170.000 less people should be at risk of poverty or exclusion. As we can see, some of the objectives of the European Union are higher compared with the Slovak Republic, but on the other hand, the European Union has also targets lower compared with the Slovak Republic. Slovak Republic does not have one target concerning the energy efficiency issue.

To illustrate the Slovak regional policy background we have to keep in mind that Slovakia has one "more developed region" – Bratislava region and three "less developed regions" Western, Central and Eastern Slovakia regions. To sum up briefly, in terms of Regional Policy in Slovak Republic from the last finished period of 2007 – 2013 we can observe that the total allocation from Structural policy funding for the 2007-2013 period was 11.6 billion €. Since the beginning of the 2007-2013 funding period, amongst other achievements, EU Structural policy investments have helped Slovakia to create more than 2 671 jobs including almost 2 000 jobs created in SMEs; provide direct investment aid to almost 1 000 SMEs; support around 100 SME start-ups; serve 3 300 more people with waste water and water projects; and improve public transport in the regions of Slovakia, through the purchase of new passenger trains, the reconstruction of the railway lines, etc. (Fojtikova, 2016; Eurostat [online], 2017). In terms of some success projects of Regional Policy within the European Regional Development Fund projects there is an example how the modernization of public transport network can enhance the regional development of background regions via the project of Rolling stock renewal for

smoother public passenger railway transport. The Railway Company of Slovakia purchased new rolling stock to increase the number of passengers in interregional and regional rail transport by 10 % by 2014 as compared to 2008. Expected benefits of the project help regions enhance their efforts regarding tourism industry. Total cost was € 232 million with the ERDF contribution of 88.5 million € (Haviernikova and Strunz, 2014).

In 2014-2020 Slovakia will manage seven operational programs under EU Structural policy. Of these, five programs will receive funding from the European Regional Development Fund and the Cohesion fund, one program from both the European Social fund and ERDF, and one from ESF including the Youth Employment Initiative. According to European Commission [online] (2018) data for 2014-2020, Slovakia has been allocated around 14 billion € in total Structural policy funding namely 9.2 billion € for the less developed regions (all except Bratislava), 328.7 million € for more developed regions (Bratislava), 4.2 billion € under the Cohesion fund, 223.4 million € for European Territorial Cooperation, 72.2 million € for the Youth Employment Initiative. Of this, the European Social Fund represents almost 2.2 billion € and reflects the specific challenges the country needs to address in the areas covered by the European Social Fund. The investment priorities for 2014-2020 are set out in a Partnership Agreement with the European Commission. The goal of those priorities is to promote an innovation-friendly business environment by enhancing the competitiveness of SMEs, improving innovation and research performance and developing an e-economy; develop infrastructure for economic growth and employment in particular key transport networks and sustainable urban transport; develop human capital and improved labour market participation; encourage the sustainable and efficient use of natural resources through promotion of energy efficiency and a low carbon economy, protection of the environment and adaptation to climate change; and to build modern and professional public administration by means of a thorough reform aimed at improving governance, tackling corruption and ensuring the efficiency and impartiality of the judiciary.

Very important governmental body disseminating and enhancing innovation policy across Slovak regions is a Slovak Innovation and Energy Agency (SIEA) that carries the information service for the Ministry of Economy of the Slovak Republic, with special focus on innovations and energy sector. It gathers processes and disseminates information related to the increase of energy efficiency, using of renewable energy sources, combined heat and power and the development of innovation activities. SIEA has been established by the Ministry of Economy of the Slovak Republic as a professional state subsidy organization which makes an important contribution in the achievement of governmental energy policy objectives, principally by promoting energy efficiency, new energy technologies and renewable sources. One of the main tasks how SIEA contributes promoting and implementing the synergies of regional and innovation policies is giving a pieces of advice and information service regarding the establishment and functioning of clusters. It works as an implementation agency for EU Structural funds and for various support schemes aimed on the development of innovation activities providing free expert consultancy for households, investors, energy service companies and public sector in the field of energy efficiency and renewable energy sources within the active participation in international programs aimed at energy efficiency, renewable energy sources and support of innovation activities (Zak, 2012). At last SIEA appears to be as a crucial management and information point for funds provided for Slovakia under international agreements and support mechanisms such as subsidized programs, support programs for development of SMEs, etc. and also providing consultations regarding the development of regional energy concepts and local sustainable energy action plans (SEAP) for Upper Territorial Units and Municipal authorities. In fulfilling its tasks SIEA mainly cooperates with universities, research and development institutions, and organizations

operating in the area of technical standardization and testing, Ministries, Regulatory office for network industries. SIEA has a long-lasting experience in the implementation of international projects within various EU community programs (Intelligent energy – Europe, Central Europe Program, INTERREG IVC, 7FP). Through those it is able to gain, share and disseminate best practices in the field of innovations, energy efficiency, renewable energy and energy recovery from waste.

In this part two main documents being related to innovation policy of SR are to be discussed. These are two of them: RIS3 (research and innovation policy for smart specialization) and SR innovation strategy 2014-2020. RIS3 exceed the partial responsibility of individual ministries, regional, municipal and local governments, but also civil society organizations and the business community. Its effect is based on the integration of science with innovation, research institutions and industrial and economic practice by creating adequate conditions in regional and sectoral space. RIS3 also aims at increasing the contribution of research to economic growth through global excellence and local relevance, creating a dynamic, open and innovative society as one of the preconditions for improving quality and mainly improving the quality of human resources for innovative Slovakia. The strategic goal of the SR innovation strategy until the year 2020 includes improving the ability to commercialize and adopt innovation and technology and include SR among the successful industrialized countries of the 21st century and double the share of expenditure by enterprises on innovation carried out from results of research and development activities (Dubravská and Mura and Kotulič and Novotný, 2015). The promotion of competitiveness of enterprises should be carried out through various programs especially it is about the support for clusters or support for business start-ups. The strategy also puts emphasis on education because educated and skilled workforce is a key element of the development of innovation.

#### **4. Conclusion and Further Implications**

As conclusion we can say that the current innovation landscape suggests that understanding the causes of the current innovation gap in Europe might well be a necessary step towards finding an adequate solution, but is not likely to be enough to restore Europe's leadership in innovation. The new approach to support innovation in Slovakia will help to ease the major challenges facing the Slovak innovation system, and at the same time, will mobilize innovation in all the relevant sectors through significantly stronger participation of all relevant partners at governmental and regional levels.

In this paper we have shown how Slovak regional and innovation policies are acting as a main synergic issue coming out of EU innovation and regional policies interaction. Their parallel collaboration and positive effects have significant fallouts on regional development and limiting the regional discrepancies in Slovak regions.

Finally we can summarize that innovation is a very difficult subject for public policy; it is at once a pervasive and elusive subject. It is pervasive since it entails both government and private investment; it is pervasive since it permeates all areas of public policy, from tax to labour, from telecoms to energy, from competition to industrial policy, from education to intellectual property, from immigration to health and agriculture, from supply-side to demand-side policies; and also, because it requires actions at the global, EU, national, regional and local levels.

Regarding the further vision associated with this kind of research as the follow up issues that will be necessary to be taken into consideration and be assessed are the areas such as the linkage of Innovation Union and cluster policies / clusters development in terms of technology

advance and their impact on EU creative industries development; and Strategy 2020 assessment regarding its impact on EU economy competitiveness enhancement versus the US economy in terms of the TTIP agreement (Transatlantic Trade and Investment Partnership). Regarding this context the next research will be also geared to assessing the impact of EU innovation strategy and EU Regional policy on Slovak industry policy and Slovak innovation agenda; as well as the fallout of EU Innovation policy on EU Energy policy along with implications on Slovak energy security.

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### **References**

- [1] Balaz, P. (2014). Globalization of the World Economy and the Impact of China's Expansion on the Competitiveness of EU. In *Proceedings of the 2nd International Conference on European Integration 2014 (ICEI 2014)*, pp. 14-25.
- [2] Balaz, P. (2013). International Trade in the World Crisis of the 21st Century. *Ekonomicky casopis*, vol. 61, iss. 10, pp. 1079-1083.
- [3] Baldwin, R. & Wyplosz Ch. (2009). *The Economics of European integration. 3rd edition*. Berkshire UK: McGraw-Hill Higher Education.
- [4] Brakman, S. [et al.]. (2006). *Nations and firms in the global economy - an introduction to international economics and business*. Cambridge: Cambridge University Press.
- [5] Cihelková, E. and Hnát, P. (2008). Future of the European Union within the new regionalism context [Budoucnost Evropské Unie v kontextu nového regionalismu], *Politická Ekonomie*, vol. 56, iss.1, pp. 67-79.
- [6] Dubravská, M. and Mura, L. and Kotulič, R. and Novotný, J. (2015). Internationalization of entrepreneurship - Motivating factors: Case study of the Slovak Republic. *Acta Polytechnica Hungarica*, vol. 12, iss. 5, pp. 121-133.
- [7] Drulák, P. and Druláková, R. (2014). The richness of the liberal tradition in international relations: Karl Deutsch on political community and the European integration. *International Relations*, vol. 28, iss. 3, pp. 333-349. DOI: 10.1177/0047117814545951
- [8] European Commission (2018). [online]. [cit.2018-02-16]. Retrieved from: [http://ec.europa.eu/research/innovation-union/index\\_en.cfm?pg=intro](http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=intro)
- [9] European Commission (2018). [online]. [cit.2018-01-28]. Retrieved from: [http://ec.europa.eu/regional\\_policy/what/europe2020/index\\_sk.cfm](http://ec.europa.eu/regional_policy/what/europe2020/index_sk.cfm)
- [10] Fojtikova, L. (2016). Trends in the revealed comparative advantages of the EU member states. *Economic Annals-XXI*, vol. 161, iss. 9-10 pp. 7-11. DOI: <https://doi.org/10.21003/ea.V161-02>
- [11] Hamilton, L. and Wepster, Ph. (2009). *The International Business Environment*. New York: Oxford University Press.

- [12] Haviernikova, K. and Strunz, H. (2014). The Comparison of Selected Methods Used For Identification of Cluster Potential in the Regions of the Slovak Republic. In *Political Sciences, Law, Finance, Economics And Tourism, Vol IV, Book Series: International Multidisciplinary Scientific Conferences on Social Sciences and Arts (SGEM)*, pp. 693-700.
- [13] Hitiris, T. (2003). *European Union Economics. 5th edition*. London: Prentice Hall (Pearson Education Ltd.).
- [14] Jovanović, M. N. (2014). *The Economics of European Integration*. UK, USA: Edward Elgar Publishing Ltd.
- [15] Lipkova, L. and Braga, D. (2016). Measuring Commercialization Success of Innovations in the EU. *Marketing and Management of Innovations*, iss. 4. pp. 15-30.
- [16] Lipkova, L. (2012). Innovation Policy of the European Union. In *Proceedings of the 1st International Conference on European Integration 2012, ICEI 2012*, pp. 171-178.
- [17] Mitchel, W. and Muysken, J. and Van Veen, T. (2006). *Growth and Cohesion in the European Union (The Impact of Macroeconomic Policy)*. Cheltenham UK: Edward Elgar.
- [18] Mynarzova, M. and Stverkova, H. (2015). Public Support as an Important Factor for Competitiveness of SMEs in the European Union. In *Aktualne Problemy Podnikovej Sfery 2015*, pp. 452-461.
- [19] Obadi, S. M. and Korcek, M. (2016). The "Revealed" Comparative Advantage and Competitiveness of the EU's International Trade vis a vis the USA. *Ekonomicky casopis*, vol. 64, iss. 5, pp. 397-422.
- [20] Reinert, K. A. (2012). *An Introduction to International Economics*. New York: Cambridge University Press.
- [21] Taušer, J. and Arltová, M. and Žamborský, P. (2015). Czech exports and German GDP: A closer look, *Prague Economic Papers*, vol. 24, iss. 1, pp. 17-37.
- [22] Taušer, J. and Čajka, R. (2014). Hedging techniques in commodity risk management, *Agricultural Economics - Zemedelska Ekonomika*, vol. 60, iss. 4, pp. 174-182.
- [23] Vojtovic, S. (2016). The Impact of the Structural Funds on Competitiveness of Small and Medium-Sized Enterprises. *Journal of Competitiveness*, vol. 8, iss. 4, pp. 30-45 DOI: 10.7441/joc.2016.04.02
- [24] Zak, S. (2012). International Marketing: Theory, Practices and New Trends. *Prague Economic Papers*, vol. 21, iss. 2, pp. 251-254
- [25] Eurostat Press Office (2018). [online]. [cit.2018-02-17]. Retrieved from: <http://ec.europa.eu/eurostat>

## Private Investments in European Union Countries – Polish Case

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### **Abstract**

*Private investments are considered as a crucial element of economic growth in all countries. In recent years, there has been a worrying decline in private investment, also in the European Union. That is why many researchers concentrate on questions of how countries should work seriously to create an enabling environment for private investments. The aim of the paper is to find out the answers to the research questions: 1. What are the causes of the stagnation of private investments in Poland? and 2. What are the determinants of private investments in Poland? The paper is theoretical and empirical in character. The theoretical part, which presents literature review, uses literature-based studies, which involve collection, specification and characterisation of data. Based on the information gathered in the theoretical part, the empirical part was completed with the aim to achieve the objective of the paper. The paper relies on secondary data, mainly that published by Eurostat, GUS and mBank. The results show what factors affect the growth of private investment.*

**Keywords:** *determinants, European Union, private investments*

**JEL Classification:** *E22, O11, O52*

### **1. Introduction**

Investments are a precondition for continuity of the process of resources reproduction in every economy. Continuous and effective reproduction of resources stimulates economic growth, which is mainly manifested in an increased Gross Domestic Product. Investments also impact economic development, whose pace largely depends on a percentage change of the number of employees and the pace of qualitative changes called innovativeness. It should be noted that countries that are catching up with the world technological leaders are characterised by a higher rate of innovation, which they achieve not through high research and development spending, but rather by absorbing innovation resources accumulated in the leading countries. What drives this absorption? Above all, investments in fixed assets, appropriate qualifications of employees, and good quality of institutions (Gomułka et al., 2017).

A number of studies, covering both short periods (Khan, Reinhard, 1990; Coutinho, Gallo, 1991; Server, Solimano, 1990), and long periods (Khan, Mohsin, Manmohan, Kumar, 1997; Bouton, Lawrence, Sumlinski, 2000) supported the assertion that private investments are more efficient and productive than public ones. For a few years, EU countries have been recording a worrying decrease in private investments - whether those undertaken by enterprises or households. As profit is the basic reason why entrepreneurs start investing, their decisions depend on potential investment income, related costs, and risk and uncertainty connected with both income and costs (Gomułka et al., 2017, Korombel 2013). The aim of the paper is to find out the answers to the research questions: 1. *What are the causes of the stagnation of private investments in Poland?* and 2. *What are the determinants of private investments in Poland?*

## 2. Literature Review

One of the basic factors fostering the development of all enterprises in the market economy is investment activity. In most general terms, investments are defined as resignation from current consumption for the sake of future uncertain benefits (Flak, 2000). In economic studies, investments are divided into: financial, physical, and intangible and legal ones (Piózdioch, Janik, 2011). The aim of physical investments is to create new fixed assets or improve (modernise, reconstruct, develop or redevelop) the existing items of tangible assets, and inputs in the so-called first equipment of investments (GUS, 2006, p. 643). The characteristic features of enterprises' investments which determine their character are: a relatively long period of capital freezing, long time before potential benefits are achieved, the amount of expenditure exceeds that of an enterprise's operating expenditure, usually a large impact of investment results on entities' effectiveness and competitiveness and investment-related risk (Rózański, 1997, p. 16). For enterprises, investments are a way of achieving a short-term objective of profit maximisation and a long-term objective of increasing the value of the company (Nehrebecka, Białek-Jaworska, 2006; Kasprzak-Czelej, 2013; Lemańska-Majdzik, Okręglińska and Gorzeń-Mitka, 2016).

There is an extensive empirical literature worldwide on the subject of investments. So far, the attention of researchers concerned with the theory of enterprises' investments has been focused, among other things, on the impact of the current financial situation on investment decisions, the size of an enterprise, the status of an exporter and the company's ownership structure (Nehrebecka, Białek-Jaworska, 2016). There are numerous publications available which present findings on the impact of financial factors on enterprises' investment decisions. Many authors argue that analysis of cash flows helps to explain the issues of investment spendings (Bond, Elston, Mairesse, Mulkay, 2003, p. 153; Cleary, 1999; D'Espallier, Guargilia, 2011).

It should be stressed that the previous research on determinants of private investments has not been carried out comprehensively for European countries. The findings of research conducted in Greece show that generated effects and profitability are the factors that have the biggest impact on enterprises' investments. At the same time, it has been observed that investments are almost inflexible in relation to interest rates, which were treated as the basic determinant of investments (Michaelides, Roboli, 2005). In the case of Turkey, the findings show that in the long run the real GDP, real foreign exchange rate, the relation of private sector loans to the GDP, private foreign debt, inflation and openness of trade have a significant impact on private investments (Karagöz, 2010).

## 3. Problem Formulation and Methodology

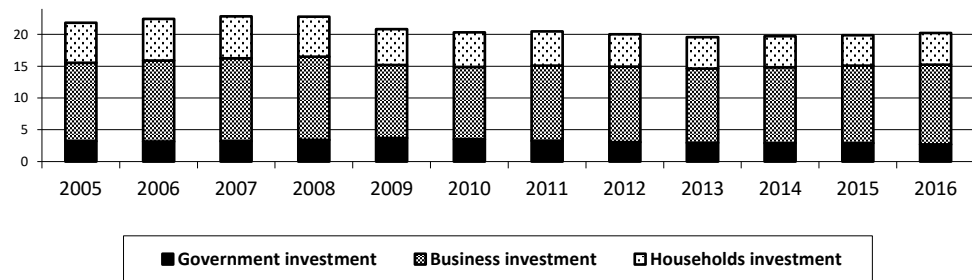
The aim of this paper is to find out the answers to the following research questions: 1. What is the cause of the stagnation of private investments in Poland? and 2. What determinants shape their level? In order to achieve this objective, the paper analyses relevant literature and documents.

The paper is theoretical and empirical in character. The theoretical part uses literature-based studies, which involve collection, specification and characterisation of data. Based on the information gathered in the theoretical part, the empirical part was completed in order to achieve the objective of the paper and answer the research questions. The empirical part relies on the method of statistical temporal and spatial comparisons. The paper is based on secondary data, published mainly by Eurostat, GUS and mBank. The research period covers the years 2005-2016.

### 4. Private Investment in European Union – Statistics

Private investments are the main driving force for economic growth. In many countries, an increase in private investments is needed in order to increase the pace of economic growth and development. Decision-makers are trying to achieve the right balance between creating a climate that is good for investments and removing barriers to investments. Many researchers are studying the mechanisms that stimulate private investments (Batu, 2016). Total investments in European Union countries (% of GDP) are presented in Figure 1.

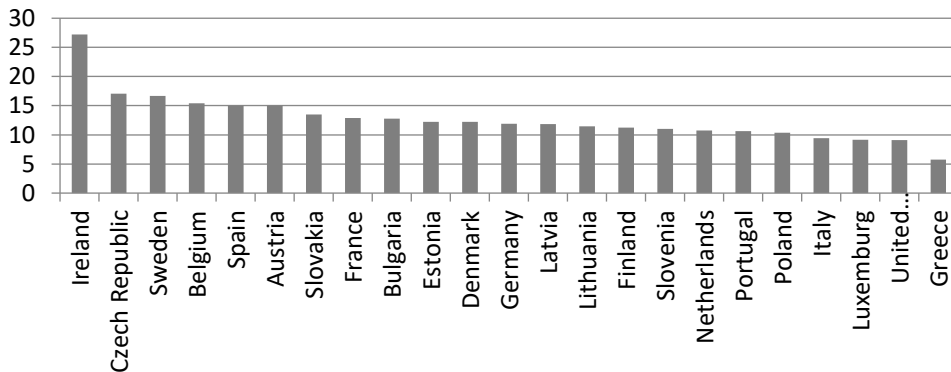
**Figure 1: Total Investments in European Union Countries (% of GDP)**



Source: Eurostat database [online] (2018), own proceedings

Figure 2 presents the level of investment rate in 23 European Union countries (data on investments in other countries was unavailable at the time of writing this paper).

**Figure 2: Business Investments in Individual Countries of the European Union in 2016 (% of GDP)**



Source: Eurostat database [online] (2018), own proceedings

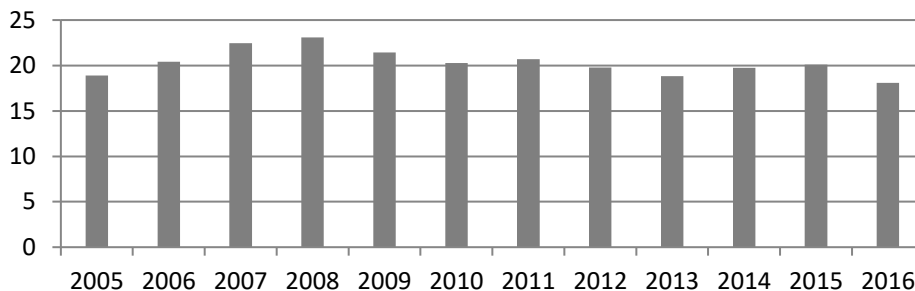
The highest level of private investment in Ireland was the result of a favorable investment climate. Not only tax incentives had an impact, but also the overall policy as well as development potential, in particular the development of economic infrastructure, human capital, EU funds creating favorable internal conditions for investment, access to the integrated EU market and a generally positive attitude towards foreign capital.



## 5. Determinants of Private Investments in Poland

Investments in Poland entered a period of stagnation. In 2016, they reached the lowest rate since 2005, down by 2.02% compared to 2015. If the 2016 investment rate is compared with the 2008 figure, the fall is even bigger - 5.03%. Total investment rates for Poland expressed as a percentage of GDP are presented in figure 3.

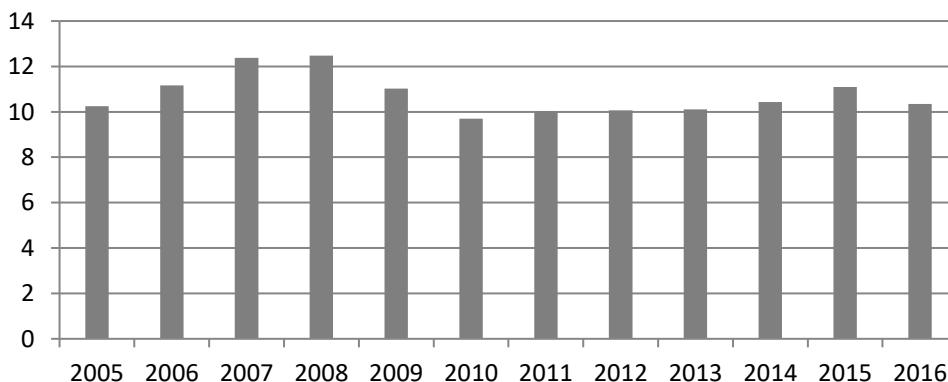
**Figure 3: Total Investment in Poland (% of GDP)**



Source: Eurostat database [online] (2018), own proceedings

Private investments in Poland show a long-term downward trend. The rate of private investments in 2016 decreased against the previous year by 0.74%. Compared to the highest level of investment rate, which was recorded in 2008 at 12.48%, the 2016 rate fell by 2.13%. Figure 4 presents private investment rates expressed as a percentage of GDP.

**Figure 4: Business Investments in Poland (% of GDP)**



Source: Eurostat database [online] (2018), own proceedings

The causes of the stagnation of private investments in Poland are not clear. Various discussions are conducted on this subject, but no consensus has been reached. In attempting to answer the first research question, it can be indicated that the most likely reasons for stagnation of private investments in Poland are (mBank.pl, 2018) the following:

1. Low ability of enterprises to shape prices (power on the market) - in the Polish industrial sector, which is characterised by high competitive pressure, the majority of enterprises function with a very high level of production capacity utilisation. The competitive position of industrial enterprises after 2009 deteriorated relatively to the phase of the

business cycle. Due to the global character of the environment, the increase in prices is often not accompanied by increases in profit margins - which discourages enterprises from investments.

2. Labour shortages - supply limits on the labour market and competition among enterprises for the labour factor prevent investments.

Factors that had the least or no impact on the stagnation of private investments in Poland include (mBank.pl, 2018):

1. Enterprises' financial resources - financial resources of enterprises in Poland since 2013 have shown an upward trend. This is confirmed by: financial results of enterprises, data on bank deposits, and continuous structural surplus of savings over investments in the sector of non-financial enterprises.
2. Demand - Assessments of the current and future demand are close to historical maximums, the assessment of insufficient demand as the barrier to the development is at historical low.
3. Taxes and regulations - The percentage of enterprises declaring high tax burdens in relation to their budgets is relatively low, and in some sectors the lowest in history. The severity of regulations does not increase, except in the trade sector. In most sectors, the percentage of enterprises indicating this barrier to business activity has not changed since 2009.
4. Uncertainty - Despite the positive correlation between uncertainty and investment plans and activity, it is not a direct cause of the low rate of private investments. This is confirmed, among other things, by: 1. The shift in assessments of uncertainty over the last years in the opposite direction, 2. lack of a clear definition of the notion of uncertainty, and specification which aspects of the economy it refers to, 3. dynamic increase in demand.
5. Correlation between private investments in Poland and investments in other countries - The dynamics of private investments in the last cycle in Poland was clearly lower than in the Czech Republic - it refers to both the period of slow-down in 2016 and recovery in 2017. There is no statistically significant anticipating relationship between the dynamics of private investments in Poland and in neighbouring countries.

Uncertainty is the most often mentioned cause of a low rate of private investments. However, experts from mBank reject this assumption, arguing that uncertainty is treated as a word that does not have a single referent, but involves a range of concerns and barriers. They argue that uncertainty should be treated as a secondary barrier which results from other factors. One of the reasons of the low rate of private investments in Poland is, according to mBank experts, competitive pressure and enterprises' limited ability to shape market prices, which, by reducing the profitability of investments or increasing its uncertainty, have a negative impact on investments decision-making (mBank 2018).

G.A. Bokpin and J.M. Onumah (2009) deeply analysed determinants of investments in fixed assets of enterprises from 34 emerging markets. The paper verifies the impact of exogenous factors (development of the financial market and macroeconomic variables) and endogenous ones (microeconomic variables) on an enterprise's investments in fixed assets. Based on panel surveys carried out using data from the period 1992-2007 from 34 developing countries, including Poland, it has been found out that the current level of enterprises' investments in fixed assets is statistically significant and positively correlated with the investments in the previous year, and negatively correlated with free cash flows, profitability and the size of a company. Among macroeconomic variables, only the impact of *per capita* GDP has been found to be statistically significant (Onumah, Bokpin, 2009).

M. Gradzewicz, J. Growiec, J. Hagemeyer and P. Popowski (2010) studied the business cycle in Poland. The researchers showed that variability of investment expenditure is over four times as high as the variability of the GDP growth rate. This relationship shows that in explaining the process of economic growth, identifying the significance of savings in the business sector plays a very important role among determinants of the level of enterprises' investment expenditure. D. Juszczak, E. Kojder-Ogarek and J. Czyżowska (2017) studied general relationships between investment expenditure in Polish enterprises and macroeconomic variables resulting from the economic situation. The findings of these authors show that enterprises' investments are to a large extent determined by the economic situation - investments are pro-cyclical. Reductions of interest rates by the National Bank of Poland were accompanied by an increase in investment expenditure both in the national economy and in the industry. Increased investments also followed reduction of the credit rate. Moreover, the amounts of corporate deposits and loans are factors that to a large extent precede new investments.

Research into investment determinants can be divided into two groups: The first group uses macroeconomic analyses and analyses time series for one or more countries, whereas the second group of research relies on macroeconomic approach based on data at the level of enterprises (Kasprzak-Czelej, 2013). Thus, among the factors impacting enterprises' investment decisions, two basic categories are distinguished: external and internal factors. The external factors include: demand for an enterprise's products and services; cost of obtaining borrowed capital and access to external sources of financing; overall economic situation of the country; investment climate; resources in the economy (including natural ones); system solutions (financial, economic, institutional); socio-political stabilisation; state policy; formulation of requirements in various spheres of business activity (e.g. environmental protection standards); regulations on access to public procurement for the different groups of enterprises; stability of the existing legal regulations and predictability of potential changes; tax policy; legislation on investments, including the system of investment permissions; present and potential competition; degree of the economy's openness; technological progress; barriers (e.g. to the import). The group of internal factors usually includes: size, mobility and profitability of an enterprise's own resources; ability to obtain resources to meet an enterprise's needs; organisation and system of management, organisational culture and conducting of negotiations; an enterprise's adaptation to high changeability of its environment; ability and willingness to invest; available financial resources; an entity's credit capacity; degree of production capacity utilisation; degree of physical wear and tear and obsolescence of fixed assets; level of knowledge and skills of the management (ability to assess potential economic, strategic and consequently financial effects of investment projects); expectations connected with potential impact of investments on their professional career and propensity to take risk (Towarnicka, 2004; Różański, 2006; Kornecki, Głodek, Nowak, Czyż, 2008; Kasprzak-Czelej, 2013). These factors may impact the ability to carry out investments, on the one hand, and investment attractiveness, on the other hand.

Currently, one of important issues of economic politics is access to widely understood EU funds and their significance for the development of enterprises (Kornecki, Głodek, Nowak, Czyż, 2008). The European Union, as part of co-financing of its fundamental goals, provides support for improvement of regional cohesion that respects the principles of sustainable development and protection of the natural environment (Ławińska, 2016).

As an answer to the research question 2, we can indicate three groups of determinants of private investments in Poland (table 1).

**Table 1: Determinants of Private Investments in Poland**

Determinants of private investments	Factors
Investment income	Expectations about the future economic situation
	Level of economic activity and production capacity utilisation
	Technological change
	Public policy
Investment costs	Interest rate
	Cost of capital goods
	Costs of other production factors
	Public policy
Risk and uncertainty	Risk of the situation stability
	Bad public policy creates uncertainty

Source: own elaboration based on (Gomułka et al. [online], 2018)

The most important determinants of the investment in Europe are:

1. Uncertainty about future economic conditions and expected profits;
2. Microeconomic factors - weaknesses in the business environment and rigidities in labour and product markets hinder the reallocation of resources;
3. Macroeconomic factors;
4. Financing conditions of investment.

The business environment influences a firm's decision to invest through channels modernising equipment, entry in a market, expanding in new activities/markets. Business regulations are the key to functioning of the private sector. These regulations apply to areas such as: creating and scaling up a business, getting credit, protecting minority shareholders, enforcing contracts, resolving insolvency and closing a business, paying tax, compliance costs, the predictability and stability of legislation (European Union, 2017).

## 6. Conclusion

It is difficult to talk about economic development or growth, when investments are in the phase of stagnation. In the case of public investments, it is the government that decides how much financial resources will be allocated for investments. In the case of private investments, their amount results from individual decisions of entrepreneurs, who make investment decisions mainly based on the profit and effectiveness of potential investments. Currently, there is stagnation of private investments in Poland. It is impossible to indicate one single cause of this situation. Undoubtedly, high competitiveness of enterprises and resulting limited capability of shaping market prices combined with labour shortages do not encourage entrepreneurs to undertake private investments. Building a positive climate for private investments is connected with the amount of potential investment income, related costs as well as risk and uncertainty concerning revenues and costs. A factor fostering the development of private investments in Poland is undoubtedly EU funds allocated to new operational programmes.

## References

- [1] Batu, M.M. (2016). Determinants of Private Investment: A Systematic Review. *International Journal of Economics, Finance and Management Sciences*, vol. 4, No. 2, pp. 52-56.

- [2] Bokpin, G.A. and Onumah, J.M. (2009). An empirical analysis of the determinants of corporate investment decisions: Evidence from emerging market firms. *International Research Journal of Finance and Economics*, vol. 33, pp. 134-141.
- [3] Bond, S., Elston, J., Mairesse, J. and Mulkay, B. (2003). Financial factors and investment in Belgium, France, Germany, and The United Kingdom: A comparison using company panel data. *The Review of Economics and Statistics*, vol. 85, no. 1, pp. 153-165.
- [4] Bouton, L. and Sumlinski, M.A. (2000). *Trends in Private Investment in Developing Countries. Statistics for 1970-1998*. IFC Discussion Paper 41. Washington, D.C.
- [5] Cleary, S. (1999). The relationship between firm investment and financial status. *The Journal of Finance*, vol. 54, No. 2, pp. 673-692.
- [6] Coutinho, R. and Gallo, G. (1991). *Do Public and Private Investment Stand in Each Other's Way?* World Development Report Background Paper. World Bank. Washington, D.C.
- [7] Gomułka, S. et al. (2017). *Raport. Perspektywy dla Polski. Polska gospodarka w latach 2015-2017 na tle lat wcześniejszych i prognozy na przyszłość* [online]. [cit.2018-02-17]. Available at: <https://for.org.pl/pl/publikacje/raporty-for/raport-for-perspektywy-dla-polski-polska-gospodarka-w-latach-2015-2017-na-tle-lat-wczesniejszych-i-prognozy-na-przyszlosc>.
- [8] D'Espallier, B. and Guargilia, A. (2011). *Does the investment opportunities bias affect the investment-cash flow sensitivities of unlisted SMEs?* [online]. [cit.2018-02-20]. Available at: <http://nottingham.ac.uk/cfc/documents/papers/09-12.pdf>.
- [9] European Union (2017). *European Economy, Investment in the EU. Member States An Analysis of Drivers and Barriers*, Institutional Paper 062.
- [10] Eurostat (2016). *Statistic Database: Investment* [online]. [cit.2018-02-16]. Available at: <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&pcode=tec00132&language=en>.
- [11] GUS (2006). *Rocznik Statystyczny Rzeczypospolitej Polskiej*, Warszawa.
- [12] Janik, W. and Paździor, A. (2011). *Zarządzanie finansowe w przedsiębiorstwie*, Lublin: Politechnika Lubelska.
- [13] Juszczak, D., Kojder-Ogarek, E. and Czyżowska, J. (2017). Inwestycje przedsiębiorstw w świetle krajowej sytuacji ekonomicznej. *Nierówności Społeczne a Wzrost Gospodarczy*, No. 50 (2), pp. 177-194.
- [14] Kasprzak-Czelej, A. (2013). Determinanty inwestycji przedsiębiorstw. *Annales Universitatis Mariae Curie-Skłodowska, sectio H – Oeconomia*, No. 47(2), pp. 85-92.
- [15] Karagöz, K. (2010). Determining Factors of Private Investments: An Empirical Analysis for Turkey. *Sosyoekonomi*, No. 1, pp. 7-26.
- [16] Khan, M.S. and Kumar, M.S. (1997). Public and Private Investment and The Growth Process in Developing Countries. *Oxford Bulletin of Economics and Statistics*, No. 59 (1), pp. 69-88.

- [17] Khan, M.S. and Reinhart, C. (1990). Private Investment and Economic Growth in Developing Countries. *World Development*, No. 18(1), pp. 19-27.
- [18] Kornecki, J., Głodek, P., Nowak, S. and Czyż, P. (2008). *Potencjał rozwojowy polskich MSP. Raport końcowy*. PARP, Warszawa, pp. 28-29.
- [19] Korombel A. (2013). *Apetyt na ryzyko w zarządzaniu przedsiębiorstwami*, Częstochowa: Wydawnictwo Politechniki Częstochowskiej.
- [20] Lemańska-Majdzik A., Okręglika M. and Gorzeń-Mitka I. (2016). Selected Development Factors of Small and Medium Enterprises. In *28th International Business Information Management Association Conference (28th IBIMA), Vision 2020: Innovation Management, Development Sustainability and Competitive Economic Growth*, Sevilla, Spain, pp. 1090-1099.
- [21] Ławińska, O. (2016). Planning and implementation of infrastructure investments financed from EU funds in Czestochowa in 210-2015. In E. Kovářová, L. Melecký and M. Staničková (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB – Technical University of Ostrava, 2016, pp. 546-554.
- [22] mBank (2018). *Nasz (jedynie słuszny) pogląd na wszystko* [online]. [cit.2018-02-26]. Available at: [https://www.mbank.pl/pobierz/serwisiekonomiczny/njspw/njspw\\_2018\\_01\\_19.pdf?noredir](https://www.mbank.pl/pobierz/serwisiekonomiczny/njspw/njspw_2018_01_19.pdf?noredir).
- [23] Michaelides, P.G. and Roboli, A. (2005). *The Determinants of Investment Activity in Greece (1960- '99)*. Published in: Aegean Working Papers , Vol. 3, pp. 23-45.
- [24] Nehrebecka, N. and Białek-Jaworska, A. (2016). Determinanty inwestycji przedsiębiorstw w środki trwałe. Zależność od cash flow i warunków kredytowych. *Econometrics*, No. 3(53), pp. 115-145.
- [25] Onumah,, J.M. and Bokpin, G.A. (2009). An empirical analysis of the determinants of corporate investment decisions: evidence from emerging firms. *International Research Journal of Finance and Economics*, iss. 33, pp. 134-141.
- [26] Różański, J.(1997). *Inwestycje rzeczowe i kapitałowe*. Warszawa: Difin.
- [27] Radzewicz, M., Growiec, J., Hagemeyer, J. and Popowski, P. (2010). Cykl koniunkturalny w Polsce – wnioski z analizy spektralnej. *Bank i Kredyt*, vol. 41, No. 5, pp. 41-76.
- [28] Serven, L. and Solimano, A. (1990). *Private Investment and Macroeconomic Adjustment: Theory, Country Experience and Policy Implications*. World Bank, Washington, D.C.
- [29] Towarnicka, H. (2004). *Strategia inwestycyjna przedsiębiorstwa*. Wrocław: Akademia Ekonomiczna im. O. Langego.

## Mobility in European Transport Policy

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### **Abstract**

*Rapidly progressing urbanization processes, the creation of multi-million cities and agglomerations, have a negative impact on the conditions and quality of life of residents. Reduction of unfavorable phenomena related to the expansion of urban centers is one of the priorities of global development. The expansion of urbanized areas and simultaneous separation of the functions of urban areas increase the mobility of urban residents and increase the average travelled distance. Therefore, the transport factor becomes the basic condition for future development of large cities and the quality of life in the city. The concept of sustainable mobility in cities is related to the objectives aimed at improving both energy consumption and environmental indicators in cities. The European Commission points out the need to undertake actions aimed at better planning of mobility taking into account the principle of sustainable development. The aim of the article is to present EU documents related to creating sustainable urban mobility and relevant solutions and instruments.*

**Keywords:** EU, public transport, sustainable city, sustainable mobility, transport policy, urban transport

**JEL Classification:** O18, Q01, R41

### **1. Introduction**

Transport is an important element of the functioning and development of modern economy. Transport is required to meet expectations in the area of increasing mobility, timeliness of deliveries and quality of service. To meet these requirements, the transport system should be modern, integrated and developed in an optimally planned way (Tomanek, 2016). The basis for the creation of an integrated transport system of the countries forming the European Union is a common transport policy, with legal basis included in the EEC Treaty of Rome (European Commission, 2018a). The European Union countries sought to develop a common transport policy and to form a coherent transport system, which would be the basis for the smooth functioning of the common internal market. Along with the development of the European Union, new issues and areas covered by the common transport policy appeared, such as: effective development of the transport system taking into account the principles of market economy and fair competition, liberalization of transport services, creation of uniform transport and telecommunications infrastructure, design and development of new transport technologies (Janic, 2001), integration of collective and individual transport, ensuring sustainable transport development. As a modern transport system must be a sustainable system from economic, social and environmental points of view, particular issues have been the subject of documents published by the European Commission such as Green and White Papers and Communications. The EU transport policy focuses on the goals that foster the integration of the Union, the liberalization of the transport services market within the grouping, the

protection of the natural environment and guaranteeing traffic and transport safety (Mesjasz-Lech, 2016).

The common transport policy aims at increasing mobility, removing major barriers in key areas and accelerating economic growth and employment. Reducing Europe's dependence on oil imports and carbon dioxide emissions in the transport sector by 60% by 2050 are also vital goals of EU's transport policy. The key goals for 2050 are:

- withdrawing the vehicles with conventional drive from cities,
- achieving a 40% level of sustainable low-carbon fuel consumption in aviation,
- reducing emissions in the maritime transport sector by at least 40%,
- shifting 50% of medium-distance interurban passenger traffic and transport of goods from roads to rail and waterborne transport.

All these goals are focused on reducing total emissions in transport by 60% in the first half of this century. Other issues covered by the EU transport policy relate to infrastructure planning, use of information technology, safety and security, passenger rights and international cooperation (European Commission, 2018b).

## **2. Problem Formulation and Methodology**

The issue of reducing the negative impact of transport on natural environment has assumed a growing importance, especially in urban areas, where most of economic and social activities take place.

The process of rapid urbanization has been going on since 1950s, and it is predicted that it will continue in the coming decades. In 1950 more than two-thirds of people lived in rural areas and only less than one-third in cities. But the situation has changed since then and already in 2014 more than half of the world population lived in urban areas. Over next 30 years the population of cities is expected to grow even further, and by 2050 the reversal of 1950 situation (2/3 population living in cities and 1/3 living in rural areas) is predicted (United Nations, 2014). The same trend can be observed in the EU: in 2010 73% of EU population lived in urban areas and this number is expected to increase to over 80% by year 2050. At the same time many European cities currently face severe problems resulting from transport and traffic. Ongoing social and economic changes accompanied by growing mobility and growing number of private cars resulted in increased urban sprawl and longer commuting time. Comparatively slower development of public transport network only makes the problems (e.g. congestion, air and noise pollution, road safety) more severe (European Union, 2017). Table 1 presents population changes in selected capitals of EU countries in the years 2000-2030.



**Table 1: Changes in the Population of Selected Capitals of EU Countries in the Years 2000-2030**

Country	City	City population (thousand)			Average annual rate of change (percentage)	
		2000	2016	2030	2000-2016	2016-2030
Austria	Vienna*	1549	1763	1959	0,8	0,8
Belgium	Brussels***	1792	2061	2203	0,9	0,5
Bulgaria	Sofia**	1128	1230	1230	0,5	0,0
Czech Republic	Prague*	1172	1324	1437	0,8	0,6
Denmark	Copenhagen**	1077	1281	1455	1,1	0,9
Finland	Helsinki**	1019	1190	1293	1,0	0,6
France	Paris**	9737	10925	11803	0,7	0,6
Germany	Berlin*	3384	3578	3658	0,3	0,2
Greece	Athens**	3179	3046	3169	-0,3	0,3
Hungary	Budapest*	1787	1712	1811	-0,3	0,4
Italy	Roma***	3385	3738	3842	0,6	0,2
Ireland	Dublin**	989	1185	1467	1,1	1,5
Netherlands	Amsterdam**	1005	1099	1213	0,6	0,7
Poland	Warsaw*	1666	1727	1791	0,2	0,3
Portugal	Lisbon***	2672	2902	3192	0,5	0,7
Romania	Bucharest*	1949	1865	1939	-0,3	0,3
Spain	Madrid*	5014	6264	6707	1,4	0,5
Sweden	Stockholm**	1206	1507	1757	1,4	1,1
United Kingdom	London**	8613	10434	11467	1,2	0,7

\*City Proper, \*\* Urban Agglomeration, \*\*\*Metropolitan area

Source: based on (United Nations, 2016).

Taking into consideration the increasing population living in urbanized areas and the current problems resulting from the inefficiency of the urban transport system, it is necessary to pay more attention to solutions promoting sustainable urban mobility. Therefore, the aim of the study is to analyse EU documents that include issues of mobility and sustainable urban mobility. To achieve this goal the analysis of the content of selected EU documents regarding transport policy will be performed.

### 3. Problem Solution

In 1992 the European Commission presented “Green Paper on the Impact of Transport on the Environment. A Community Strategy for ‘Sustainable Mobility’” (European Commission, 1992). Another EU Commission- COM document, referring to the topic of sustainable mobility, called „The Common Transport Policy. Sustainable Mobility: Perspectives for the Future” was published in 1998 (European Commission, 1998). The Commission pointed out the negative effects (especially on environment) of the development of individual motorisation.

On September 12, 2001, the Commission of the European Communities presented the White Paper "European Transport Policy for 2010: time to decide" (European Commission, 2001). It defined the directions of the European Union's transport policy up to 2010, underlining the relevance and timeliness of the current EU transport policy objective of sustainable development, indicating the need to manage the development of the transport system in a more sustainable way.

The next stage of the EU transport policy was the "Green Paper. Towards a new culture for urban mobility" of August 25, 2007 (European Commission, 2007). The document presented a new approach to urban mobility, consisting in optimizing various modes of transport and creating favorable conditions for multimodal travels, making use of various collective transport systems (railway, metro, bus, taxi) and individual transport. Five main challenges for transport in cities were defined:

- increasing traffic flow in cities,
- ecological problems resulting from the domination of combustion engines,
- implementing the intelligent transport systems,
- improving the accessibility of public transport,
- increasing the reliability and security of urban transport.

The document stressed that mobility directly affects the quality of life of urban residents and is one of the important factors affecting the economic development of cities and the environment. One of the most frequently indicated problems of the transport system in cities is the growing road congestion. In order to increase the flow of traffic in cities, efforts should be made to increase the attractiveness of alternative forms of locomotion, in particular public transport, cycling and pedestrian traffic (Kos-Łabędowicz, 2016). In accordance with the document municipal authorities are also tasked with promotion of multimodal travel and the development of the necessary infrastructure. Another important element of the urban policy is the implementation of intelligent transport systems, the use of which affects the increase of the capacity of the road system without its physical extension.

The next stage of the policy of sustainable urban mobility was the publication of the European Commission Communication „Action Plan on Urban Mobility”(European Commission, 2009). Short- and medium-term practical actions that address the problem of sustainable urban mobility in an integrated manner were pointed out. The proposed actions were focused on the six following issues:

- supporting integrated policy,
- taking into account the well-being of citizens,
- greener urban transport,
- increasing funding,
- sharing experience and knowledge,
- optimization of urban mobility.

The document stated that urban development problems are very complex and that their solutions require an integrated approach. As a consequence, urban mobility plans should be developed and implemented in accordance with the principles of sustainable development. Urban transport, organized according to the idea of sustainable development can significantly improve the quality of the environment.

In the White Paper "Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system" of 2011, it is pointed out that it is necessary for urban areas to create strategies including spatial planning, pricing systems, efficient public transport

services and infrastructure for non-motorized transport. In Annex I, "List of initiatives" of the White Paper, one of the actions indicated the analysis of the possibility of introducing mobility plans as a mandatory solution for cities of a certain size. The recommendations contained in the document, which has a time horizon up to 2050, concern (European Commission, 2011):

- growth of the transport sector while reducing greenhouse gases emitted by the sector by 60%,
- developing an effective multimodal travel and transport network between urban centres,
- equal opportunities for long-distance travel and intercontinental cargo transport all over the world,
- liberalization of transport regulations,
- supporting urban transport.

The document indicates the necessity of systemic support for the development and implementation of mobility plans and the need to prepare such plans in the context of the distribution of EU funds.

Almost simultaneously with the described White Book, a Community Development Strategy was prepared, which also addressed the issues of sustainable mobility. Europe 2020 - a strategy for smart, sustainable and inclusive development was a document setting out a long-term vision for the development of the European Union by 2020. The vision was focused on three priorities (European Commission, 2010):

- innovation and knowledge-based economy,
- development of a resource efficient economy, competitive and environmentally friendly,
- support for an economy characterized by a high level of employment and ensuring economic, social and territorial cohesion.

The issues of urban transport and mobility were addressed directly in the framework of actions for sustainable development.

In December 2013, the European Commission issued a communication: "Together towards competitive and resource-efficient urban mobility" (European Commission, 2013). According to the European Commission, a fundamental change in the approach to urban mobility was necessary, aimed at creating a competitive and resource-efficient European transport system. The implementation of systematic actions for sustainable mobility required cooperation of public entities at all levels of government and the involvement of the private sector. This cooperation should be focused on the following areas (in accordance with the provisions of the White Paper):

- urban logistics (e.g. by creating cooperation platforms, data exchange and information for all participants of urban logistics chains),
- intelligent regulations on access to cities and road toll systems (implementation and evaluation of regulations on the payment systems for the use of municipal roads),
- coordinated application of urban intelligent transport systems (creation of interpretive databases on multimodal transport containing information on urban mobility),
- road safety in cities (collecting data on road safety with the highest possible level of detail).

The Urban Mobility Package including proposals of actions on different administrative levels (local, national, EU's) was adopted by Commission in December 2013. Urban mobility was

recognized primarily as a responsibility for local actors, who were encouraged to plan and undertake appropriate actions concerning urban transport and mobility. The concept of Sustainable Urban Mobility Plans (SUMP) focusing on the following areas: city logistics, access regulation, urban ITS and urban safety, was introduced by Commission (European Commission, 2014).

SUMP is a strategic plan created to meet the needs of people's mobility and the economy in cities and their surroundings, for a better quality of life. It is based on existing planning practices and takes into account the principles of integration, public participation and process evaluation. The aim of SUMP is to present directional, integrated activities that clearly lead to an increase in the sustainability of transport and in the mobility of the society in the area covered by the planning (Wefering et al., 2014). In order to effectively implement the SUMP, it is necessary to use a range of instruments, measures, tools and strategies that will ultimately help sustainable urban mobility. The basic instruments include: legal, planning, investment, financial and instruments related to creation, sale, booking of mobility products, coordination and organization of solutions and transport services; educational, information and promotional activities under influence of which communication behavior of urban population can change (Kos, 2015; Nosal and Starowicz, 2010; Ungemah and Dusza, 2009; Murray et al., 1997). An important role in these solutions is attributed to public urban transport, which due to technical, economic and organizational solutions may become more attractive way of moving than an individual car.

Eltis, The Urban Mobility Observatory has played a significant role in supporting activities in the area of planning sustainable urban mobility. The portal was launched in 2000 and since then it has developed into platform vital for all issues related to urban mobility. By targeting individuals working in transport and related disciplines (e.g. urban and regional development, health, energy and the environmental sciences) it has facilitated the exchange of information, knowledge and good practices concerning the urban mobility. Currently Eltis is the main European urban mobility observatory and as such it provides wide range of information and serves as a channel for discussion helping European cities adopt the concept of sustainable urban mobility. The section dedicated to the Sustainable Urban Mobility Plans (SUMP) provides information concerning development and implementation of such plans as they are more widely recognized and nearly universally needed.

#### **4. Conclusion**

Coordinated actions of public authorities at different levels (both local, national and EU's) are needed in order to successfully transform urban mobility. European Commission has been actively supporting different initiatives and projects in this area (e.g. research, development, training) for nearly two decades. Many EU documents indicate the necessity to take measures limiting the negative impact of urban transport on the natural environment. Transport is one of the factors determining the development opportunities of big cities and the quality of life in the city. The concept of transport planning through mobility modelling is related to the creation of such a mobility system in the urban area, which on the one hand will increase the availability of individual areas and services, constituting a significant development impulse, and on the other hand will contribute to improving the quality of life of residents and the environment. Therefore, the undertaken actions should indicate how to effectively create a transport system in the city with use of all available resources and taking into account the need to promote eco-friendly and energy-saving ways of travelling. Creating sustainable mobility requires the implementation of activities in various spheres of city and society development. The implementation of SUMP can accelerate the process of changing urban mobility towards more

efficient forms and methods in accordance with the concept of sustainable development. Policies concerning urban mobility commonly relate to other EU policies concerning such areas as energy, climate change, air quality, economy, social equity and accessibility, innovation, IT deployment and smart cities.

## References

- [1] Eltis (2016). *About us* [online]. [cit.2018-02-25]. Available at: <http://www.eltis.org/discover/about-us>.
- [2] European Commission (1992). *Green Paper on the Impact of Transport on the Environment. A Community Strategy for "Sustainable Mobility"* [online]. [cit.2018-02-24]. Available at: [http://aei.pitt.edu/1235/1/transport\\_environment\\_gp\\_cOM\\_92\\_46.pdf](http://aei.pitt.edu/1235/1/transport_environment_gp_cOM_92_46.pdf).
- [3] European Commission (1998). *The Common Transport Policy. Sustainable Mobility: Perspectives for the Future*. [online]. [cit.2018-02-24]. Available at: [http://aei.pitt.edu/1248/1/transport\\_policy\\_COM\\_98\\_716.pdf](http://aei.pitt.edu/1248/1/transport_policy_COM_98_716.pdf).
- [4] European Commission (2001). *European Transport Policy for 2010: time to decide* [online]. [cit.2018-02-23]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519397244109&uri=CELEX:52001DC0370>.
- [5] European Commission (2007) *Green Paper. Towards a new culture for urban mobility* [online]. [cit.2018-02-23]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519397502616&uri=CELEX:52007DC0551>.
- [6] European Commission (2009). *Action Plan on Urban Mobility* [online]. [cit.2018-02-24]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519478723328&uri=CELEX:52009DC0490>.
- [7] European Commission (2010). *Europe 2020 – A strategy for smart, sustainable and inclusive growth*. Brussels: COM (2010) 2020
- [8] European Commission (2011). *White Paper Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system* [online]. [cit.2018-02-24]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519502204143&uri=CELEX:52011DC0144>.
- [9] European Commission (2013). *Together towards competitive and resource-efficient urban mobility* [online]. [cit.2018-02-24]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519502926654&uri=CELEX:52013DC0913>.
- [10] European Commission (2014). *Opinion of the Committee of the Regions – Urban Mobility Package* [online]. [cit.2018-02-24]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519503691394&uri=CELEX:52014IR0090>.
- [11] European Commission (2018a). *Treaty of Rome (EEC)* [online]. [cit.2018-02-23]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:xy0023>.
- [12] European Commission (2018b). *Transport policy EU* [online]. [cit.2018-02-23]. Available at: <http://eur-lex.europa.eu/summary/glossary/eu-transport-policy.html>.

- [13] European Union (2017). *European Urban Mobility, Policy Context* [online]. [cit.2018-02-23]. Available at: <https://ec.europa.eu/transport/sites/transport/files/2017-sustainable-urban-mobility-policy-context.pdf>.
- [14] Janic, M. (2001). Integrated transport systems in the European Union: an overview of some recent developments. *Transport Reviews*, vol. 21, iss. 4, pp. 469-497.
- [15] Kos, B. (2015). Development of Electronic Payments in Poland Using the Example of Local and Regional Collective Transport. In: Mikulski J. (eds) *Tools of Transport Telematics. TST 2015*. Communications in Computer and Information Science, vol 531. Springer, pp. 352-361.
- [16] Kos-Łabędowicz, J. (2016). ICT and the Future of Urban Transportation. European Perspective. In: Mikulski J. (eds) *Challenge of Transport Telematics. TST 2016*. Communications in Computer and Information Science, vol 640. Springer, pp. 122-134.
- [17] Mesjasz-Lech, A. (2016). Directions of Changes in the Sustainable Development of Transport in Poland in the Context of European Integration. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 624–630.
- [18] Murray G. et al (1997). *Strategies to assist local transportation agencies in becoming mobility managers*. [online]. [cit.2018-02-25]. Available at: [http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp\\_rpt\\_21-a.pdf](http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_21-a.pdf).
- [19] Nosal, K. and Starowicz, W. (2010). Wybrane zagadnienia zarządzania mobilnością. *Transport Miejski i Regionalny*, No. 3, pp 26-31.
- [20] Tomanek, R. (2016). Intelligent Solutions in Sustainable Transport Upper Silesia Agglomeration. In: Mikulski J. (eds) *Challenge of Transport Telematics. TST 2016*. Communications in Computer and Information Science, vol 640. Springer, pp. 342-353.
- [21] Ungemah, D. and Dusza, C. (2009). Transportation Demand Management Benchmark: Results from 2008 TDM Program Survey. *Transportation Research Record: Journal of the Transportation Research Board*, vol. 2118, pp 55-66.
- [22] United Nations (2014). *Our Urbanizing world* [online]. [cit.2018-02-23]. Available at: [http://www.un.org/en/development/desa/population/publications/pdf/popfacts/PopFacts\\_2014-3.pdf](http://www.un.org/en/development/desa/population/publications/pdf/popfacts/PopFacts_2014-3.pdf).
- [23] United Nations (2016). *The World's Cities in 2016* [online]. [cit.2018-02-24]. Available at: [http://www.un.org/en/development/desa/population/publications/pdf/urbanization/the\\_worlds\\_cities\\_in\\_2016\\_data\\_booklet.pdf](http://www.un.org/en/development/desa/population/publications/pdf/urbanization/the_worlds_cities_in_2016_data_booklet.pdf).
- [24] Wefering, F. et al. (2014). *GUIDELINES Developing and Implementing a Sustainable Urban Mobility Plan* [online]. [cit.2018-02-25]. Available at: [http://www.eltis.org/sites/eltis/files/bump\\_guidelines\\_pl.pdf](http://www.eltis.org/sites/eltis/files/bump_guidelines_pl.pdf).

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### **Abstract**

*The development and use of ICT has been treated for over twenty years as a priority area of action affecting the economic competitiveness of the European Union. Documents and initiatives in this area are developed at the EU level and implemented by individual Member States, most recently within the framework of the European Digital Agenda. The transport sector in the European Union, which is to support the development of trade, economic growth, create new jobs and conditions conducive to prosperity is also considered to be an important area of activities. Considering the complicated relationship between the development and dissemination of ICT and their impact on transport, analysis of EU transport policy documents has been carried out in view of the approach to various types of ICT solutions that can be implemented in the European transport system.*

**Keywords:** European Union, European Union policies, ICT, transport sector

**JEL Classification:** O14, O19, O52

### **1. Introduction**

Transport and communication are two factors that shape the economic reality to a large extent and determine the conditions affecting all market players. This results to a large extent from the complementarity of functions performed by these two factors. Transport - or rather the transport system - enables the flow of resources, goods and people, and communication systems enable the flow of various types of information - including those important for the realization of transport processes (Kos-Łabędowicz, 2015).

The dynamic development and dissemination of various types of modern information and communication technologies (ICTs), which have been underway since the 1990s, affect almost all aspects of life and business. ICT development and its widespread use have long been perceived by the European Union as, on the one hand, important factors affecting economic growth and competitiveness, and on the other as an area where the European Union has been losing, in terms of development, speed in comparison with other highly developed economies such as the United States or Japan. Measures undertaken within the framework of EU structures to increase the use of ICT and the resulting improvement in the competitiveness of the EU economy have had a long tradition (the beginnings date back to the 1990s) and continuous character (consecutive strategies and action plans compatible and subject to the EU's overall development strategies).

The transport sector of the European Union is both an area of great importance from economic, social and environmental points of view and also the one in which changes related to the increase in the use of ICT are clearly visible. Research on the impact of ICT on transport largely runs in two distinct directions. On the one hand, it is examined how the use of ICT

affects transport (passenger and freight), both how the use of new technologies can change (usually improve) ways of providing transport services by enterprises or how it changes (improves) travelling for individuals. On the other hand, researches embracing broader socio-economic context, attempting to identify and analyse how the use of ICT by individuals and enterprises is changing the demand for transport services, are carried out (Kos-Łabędowicz, Urbanek, 2017).

Nearly universal access to the Internet, increasingly cheaper phones and other mobile devices combined with the development of e-commerce and various types of e-services (e.g. e-payment, e-learning, e-health) significantly affect both the behaviour of individuals and all types of organizations (including enterprises, NGOs, public administration). And so consumers more and more often decide to use the opportunities offered by e-commerce and various types of e-services, accessing them in the place and time they chose. Enterprises are also increasingly seeking new opportunities offered by ICT in order to improve their operations through the use of systems such as ERP (Enterprise Resource Planning), CRM (Customer Relationship Management) crowdsourcing platforms or by enabling employees to work remotely. All these changes have an impact on the transport sector and their inclusion is necessary in the process of formulating transport policy both at the EU and Member States levels.

## **2. Problem Formulation and Methodology**

The analysis of EU documents regarding the use of ICT potential has revealed some areas of the broadly understood transport sector, in which the use of ICT may be beneficial. (Kos-Łabędowicz, 2016). Those highlighted areas of the transport sector are: the development of Intelligent Transportation Systems (ITS), included in all key EU ICT policy documents; public transport, included in eEurope - An Information Society for all (Eur-Lex, 1999) and Action Plan: eEurope 2002 (Eur-Lex, 2000); actions aimed at implementing ICT systems to improve security, indicated as a model initiative in the field of improving the quality of life in the i2010 strategy - A European Information Society for Growth and Employment (Eur-Lex, 2005).

Taking into account these inter-dependencies between transport and methods of transferring information (that currently take on the form of different ICTs) and the selective treatment of the transport sector in strictly ICT-related documents, it is justified to undertake research to determine to what extent ICT is included in EU transport policies. Achieving such a goal will require analysis of the content of relevant documents in the field of EU transport policy. European transport policy documents selected for analysis are presented in Table 1.

All documents selected for the analysis were prepared and published after the year 2000 and are available on the Eur-Lex platform. Selection includes the White and Green Books, Strategies and various Communications of the European Commission.

## **3. Problem Solution**

In the first of the analysed documents, the 2001 White Paper, attention is drawn to new requirements for the transport system. The possibility of further infrastructure development is questioned, pointing to the need for more efficient use of the existing one while maintaining the principles of sustainable development - paying more attention to the economic, social and environmental goals. The document proposes about 60 actions that should be implemented in the foreseen time - by 2010 - with the indication of key areas: "... shifting the balance between



the modes of transport, eliminating bottlenecks, placing customers in the heart of transport policy, managing the globalization of transport "(Eur-Lex, 2001).

**Table 1: European Transport Policy Documents Selected for Analysis**

Date	Title of the Document	Main Focus
<b>Lisbon Strategy</b>		
2001	White Paper: European transport policy for 2010: time to decide	Modern transport system should be sustainable.
<b>Renewed Lisbon Strategy</b>		
2006	Freight Transport Logistics in Europe - The key to sustainable mobility	Advanced logistic solutions are needed to optimise European transport system.
2007	Freight Transport Logistics Action Plan	Logistics has a key role in ensuring sustainable and competitive mobility in Europe.
2007	Green Paper: Towards a new culture for urban mobility	As a majority of EU's population lives in urban areas, urban mobility requires rethinking.
2008	Greening Transport	Setting price signals for transport users that will reflect real cost of their choices.
2009	Action Plan on Urban Mobility	List of integrated actions related to the urban mobility.
2009	Green Paper: TEN-T: A policy review. Towards a better integrated Trans European Transport Network at the service of the Common Transport Policy	Policy review pointing to the need of placing climate change objectives in the centre of further TEN-T policies.
2009	A sustainable future for transport: Towards an integrated, technology-led and user friendly system	Review of past policies and basis for further consideration for development of further policies.
<b>Europe 2020</b>		
2011	White Paper: Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system	Staying competitive in the transportation area, supporting mobility and at the same time ensuring sustainability and reaching emission reduction targets.
2016	A European Strategy for Low-Emission Mobility	Shift to low-emission mobility is essential for ensuring EU's competitiveness and catering to mobility needs of people and goods.
2016	A European Strategy on Cooperative Intelligent Transport Systems, a milestone towards cooperative, connected and automated mobility	The potential of cooperative, connected and automated vehicles to boost EU's industry competitiveness and ensuring transition to low-emission mobility.

Source: based on Eur-Lex (2018)

The use of new technologies is indicated in relation to particular modes of transport, and for example digital tachograph, Galileo program, GSM or telecommunication satellites are considered as a means to improve the road transport and deployment of European Rail Traffic Management System (ERTMS) as a useful tool for improving railways performance. Great

importance in the document is attributed to the improvements in the intermodality of the transport system, but most programs focus on infrastructure and ways to encourage business entities to change their transportation behaviours. Information, communication and management systems are mentioned, but rather as some of the factors required but not crucial for the success of the recommended actions. Two most prominent ICT solutions mentioned in this document are satellite radionavigation project (Galileo) and ITS, but only Galileo programme is elaborated in more detail (and with clear timeframe of application) (Eur-Lex, 2001).

Another of the analysed documents: Freight Transport Logistics in Europe - the key to sustainable mobility (Eur-Lex, 2006) and the associated Action Plan (Eur-Lex, 2007a) are the answer to the mid-term review of the 2001 White Paper. Fast growth of road freight transport and its negative effects (e.g. congestion, pollution, dependency on fossil fuels) require optimization of the transport system with the use of advanced logistics solutions. Advanced Logistics solutions are seen as an answer for ongoing problems and at the same time as a means to maintain know-how, skills and jobs in Europe. ICT solutions are seen as an important factor for all parties involved and as a prerequisite for efficient logistics. Solutions as Galileo, ITS, ERTMS are listed with appropriate new technologies as radio frequency identification (RFID), common messaging standards and new communications platforms (Eur-Lex, 2006). Action Plan takes on the importance of the ICT solutions for all types of freight transport (inland, waterborne, urban) with introduction of the term e-Freight. Concept of the e-Freight is based on the vision of paperless flow of information accompanying the movement of the goods and in future may lead to the „Internet for cargo” (Eur-Lex, 2007a).

The next analysed document is Green Paper "Towards a new culture for urban mobility" (Eur-Lex, 2007b) dealing with urban mobility. European cities differ from each other, but most of them face similar problems (e.g. congestion, pollution, inadequate transport systems). The answer is to adopt an approach consistent with the concept of sustainable development and to promote sustainable urban mobility. Among the indicated activities, ICTs take a prominent place, especially ITS, safe and intelligent vehicles and means of “virtual travel” such as tele-working or tele-shopping (Eur-Lex, 2007b).

European Commission Communication „Greening Transport” (Eur-Lex, 2008) focuses mostly on the environmental and social costs of transport (e.g. different kinds of pollutions, congestion, accidents) and on measurements aiming at reducing these externalities by setting appropriate („right”) prices for transport choices. ICT solutions such as ITS and Galileo are mentioned as the tools useful for reaching that goal, but main focus is on appropriate measures and regulations (Eur-Lex, 2008).

“Action Plan on Urban Mobility” (Eur-Lex, 2009a) lists 20 actions that should be undertaken to ensure sustainable mobility in cities under 6 Themes. Different ICT solutions are mentioned as parts of several actions, mainly the application of ITS. Galileo and is also mentioned, but more interestingly some other solutions focused on promoting alternative transportation like bike-sharing and car-sharing schemes. There is also strong focus on ICT solutions dedicated to improving public transport in cities with solutions like electronic ticketing and payment, traffic management, travel information (Eur-Lex, 2009a).

“Green Paper - TEN-T: A policy review - Towards a better integrated transeuropean transport network at the service of the common transport policy” (Eur-Lex, 2009b) is an European transport policy document focusing mainly on the infrastructure: past achievements, current state and potential further proposals and legislations. The inventory of past achievements and projects enumerates mostly the realized infrastructure projects carried out in order to further develop Trans-European Transport Network (TEN-T). Nevertheless some projects including

development and deployment of ICT solutions (like ITS, Galileo and Traffic Management and River Information Services, intelligent vehicles) are mentioned among those already completed or nearing completion. ITS has been clearly recognized as a potential versatile tool for enhancing effectiveness within different sectors and a need for ensuring its interoperability was stressed. ITS systems are also perceived as a crucial component of logistics systems (especially in terms of tracking and tracing goods) and in other sectors as a means to achieve Community policy objectives in such areas as safety, security, reducing congestion or fighting climate change. Concerns about further needs of ITS resulting from ongoing research and innovation were mentioned (e.g. need for filling stations in case of electrically-powered vehicles). Taking all into consideration it should be noted that ICT solutions, especially ITS, are given far more attention than in previously analysed transport policy documents.

European Commission Communication: “A sustainable future for transport: Towards an integrated, technology-led and user friendly system” (Eur-Lex, 2009c) resulted from the review of previous legislations and aimed at starting a discussion for preparation of further policies. Trends and challenges that should be taken into consideration were identified (e.g. ageing, migration and internal mobility, urbanization) and seven broad policy objectives for further consideration were presented (e.g. more environmentally sustainable transport or protecting and developing the human capital). ICT solutions were taken into consideration but only as a part of a broader picture – important but not prominent.

The discussions evoked by the previously described document resulted in preparation of the “White Paper: Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system” (Eur-Lex, 2011). The White Paper stays true to the goals of the European Development Strategy: “Europe 2020 - A strategy for smart, sustainable and inclusive growth” and its ambitious goals and sets its own goals concerning the future shape of efficient European transport system. Two (out of ten goals) set by this document concern directly widespread use and deployment of ICT solutions: “7. *Deployment of the modernised air traffic management infrastructure (SESAR) in Europe by 2020 ... Deployment of equivalent land and waterborne transport management systems (ERTMS, ITS, SSN and LRIT, RIS). Deployment of the European Global Navigation Satellite System (Galileo).* 8. *By 2020, establish the framework for a European multimodal transport information, management and payment system*” (Eur-Lex, 2011, pp. 9-10). Initiatives to be undertaken in order to fulfil all set goals also include projects dealing with research, development and implementation of various ICT solutions in accordance with overall goals of both Strategy Europe 2020 and the White Paper described. The member states undertake various activities to ensure the sustainable development of the EU transport system in line with the development strategy assumptions and goals (Mesjasz-Lech, 2016).

Another European document dealing with transport and its environmental impact is “A European Strategy for Low-Emission Mobility” (Eur-Lex, 2016a). It mostly focuses on the need of optimization of the transport systems and making all of their elements more effective and more sustainable. The digital technologies (ICT solutions) are seen as a means of increasing the effectiveness, safety and inclusiveness of the transport system. Even if ICT solutions are mentioned, the main focus of this documents highlights more issues concerning deployment of low-emission solutions and technologies in transport. Nonetheless, the need of developing and deploying Co-operative Intelligent Transport Systems across the EU was mentioned. It should be noted that this trend towards green transport and low-emission economy raises concerns related to maintaining EU competitiveness (Hon, Honová, 2012).

The last document chosen for this analysis, “A European strategy on Cooperative Intelligent Transport Systems, a milestone towards cooperative, connected and automated mobility”

focuses on the changes and new transport demands brought by the “...wave of technological innovation and disruptive business models” (Eur-Lex, 2016b, pp. 2). The need for rapid development and deployment of Cooperative Intelligent Transport Systems (C-ITS) previously mentioned in the “A European Strategy for Low-Emission Mobility” (Eur-Lex, 2016a) is detailed. Actions ensuring its operationality (and ideally interoperability across EU Member States) are listed. It is the first European transport policy focusing mainly on development and implementation of the ICT solutions in EU’s transport sector.

#### 4. Conclusion

ICT solutions to a greater or lesser extent are present in all analysed EU transport policy documents, but their roles and meaning differ. Three groups of documents can be distinguished due to the role and place attributed to the importance of ICT solutions in transport. In the first group of documents, ICT solutions are present and indicated as potential factors that can affect the achievement of overall goals, but the main focus is on other issues. In the second group, ICT solutions are indicated as important tools that can influence the implementation of the indicated activities - there is a slow shift towards granting them more and more importance also for the implementation of the Community's overall development objectives. And in the third group ICT solutions are perceived as the key to achieving the goals of both transport policy and the overall development objectives of the Community. Among the analysed documents, the two first categories predominate - as presented in Table 2.

**Table 2: The Place and Role Attributed to ICTs in the Analysed Documents**

Document	ICT
White Paper (2001)	ICT solutions are present but main focus is elsewhere.
Freight Transport... (2006)	ICT solutions are perceived as an important factor and a prerequisite for efficient logistics.
Freight Transport Logistics Action Plan	Importance of ICT solutions for logistics is further stressed with introduction of concept of e-Freight.
Green Paper (2007)	ICT solutions are seen as important tools for promoting sustainable urban mobility.
Greening Transport (2008)	ICT solutions are present but main focus is elsewhere.
Action Plan on Urban Mobility (2009)	ICT solutions are perceived as an important tools for ensuring sustainable urban mobility.
Green Paper (2009)	ICT solutions are seen as important tools for further functioning of Trans-European Transport Network.
A sustainable future... (2009)	ICT solutions are present but main focus is elsewhere.
White Paper (2011)	ICT solutions are seen as important tools for fulfilling objectives set for transport sector and whole Community.
A European Strategy... (2016)	ICT solutions are present but main focus is elsewhere.
A European strategy on Cooperative... (2016)	ICT solutions are seen as important tools for fulfilling objectives set for transport sector and whole Community.

Source: based on Eur-Lex (2018)

The analysis of selected EU transport policy documents shows the importance of ICT solutions for the transport sector as well as for the implementation of the Community's overall development objectives.

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## References

- [1] Eur-Lex (1999). *eEurope - An information society for all (COM/1999/0687)* [online]. [cit.2018-02-23]. Available: <http://eur-lex.europa.eu/legal-content/EN/LSU/?uri=CELEX:51999DC0687&qid=1519384587691>.
- [2] Eur-Lex (1999). *eEurope 2002 (COM/2001/0142)* [online]. [cit.2018-02-23]. Available: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:124226a>.
- [3] Eur-Lex (2001). *European Transport Policy for 2010: time to decide (COM/2001/0370)* [online]. [cit.2018-02-23]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519397244109&uri=CELEX:52001DC0370>.
- [4] Eur-Lex (2005). *i2010 – A European Information Society for growth and employment (COM/2005/0229)* [online]. [cit.2018-02-23]. Available: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52005DC0229>.
- [5] Eur-Lex (2006). *Freight Transport Logistics in Europe - The key to sustainable mobility (COM/2006/0336)* [online]. [cit.2018-02-24]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519478315170&uri=CELEX:52006DC0336>.
- [6] Eur-Lex (2007a). *Freight Transport Logistics Action Plan (COM/2007/0607)* [online]. [cit.2018-02-24]. Available at: <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex:52007DC0607>.
- [7] Eur-Lex (2007b). *Green Paper. Towards a new culture for urban mobility (COM/2007/0551)* [online]. [cit.2018-02-23]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519397502616&uri=CELEX:52007DC0551>.
- [8] Eur-Lex (2008). *Greening Transport (COM/2008/0433)* [online]. [cit.2018-02-24]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519478504382&uri=CELEX:52008DC0433>.
- [9] Eur-Lex (2009a). *Action Plan on Urban Mobility (COM/2009/0490)* [online]. [cit.2018-02-24]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519478723328&uri=CELEX:52009DC0490>.
- [10] Eur-Lex (2009b). *Green Paper - TEN-T: A policy review - Towards a better integrated transeuropean transport network at the service of the common transport policy (COM/2009/0044)* [online]. [cit.2018-02-25]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519563432330&uri=CELEX:52009DC0044>.
- [11] Eur-Lex (2009c). *A sustainable future for transport: Towards an integrated, technology-led and user friendly system (COM/2009/0279)* [online]. [cit.2018-02-

- 25]. Available at: <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52009DC0279&qid=1519386872359>.
- [12] Eur-Lex (2011). *Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system (COM/2011/0144)* [online]. [cit.2018-02-25]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519502204143&uri=CELEX:52011DC0144>.
- [13] Eur-Lex (2016a). *A European Strategy for Low-Emission Mobility (COM/2016/0244)* [online]. [cit.2018-02-25]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519568394994&uri=CELEX:52016SC0244>.
- [14] Eur-Lex (2016b). *A European strategy on Cooperative Intelligent Transport Systems, a milestone towards cooperative, connected and automated mobility (COM/2016/0776)* [online]. [cit.2018-02-25]. Available at: <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52016DC0766&qid=1519387206635>.
- [15] Eur-Lex (2018). *Transport* [online]. [cit.2018-02-23]. Available at: [http://eur-lex.europa.eu/summary/chapter/transport.html?root\\_default=SUM\\_1\\_CODED%3D32&locale=en](http://eur-lex.europa.eu/summary/chapter/transport.html?root_default=SUM_1_CODED%3D32&locale=en).
- [16] Hon, M., Honová, I. (2012). EU Energy and Environmental Policies Threatening Competitiveness of the EU. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 86–93.
- [17] Kos-Łabędowicz, J. (2015). Dependencies Between Development of Information and Communications Technologies and Transport. In: Mikulski J. (eds) *Tools of Transport Telematics. TST 2015*. Communications in Computer and Information Science, vol 531. Springer, pp. 362-370.
- [18] Kos-Łabędowicz, J. (2016). The European Union’s ICT focused policies as a means to achieve competitiveness in the global economy. In *Proceedings of 16th International Scientific Conference on Globalization and its Socio-Economic Consequences*. Rajecke Teplice: University of Zilina, The Faculty of Operation and Economics of Transport and Communications, pp. 988-995.
- [19] Kos-Łabędowicz, J. and Urbanek, A. (2017). Do Information and Communications Technologies influence transport demand? An exploratory study in the European Union. *Transportation Research Procedia*, vol. 25, pp. 2660-2676.
- [20] Mesjasz-Lech, A. (2016). Directions of Changes in the Sustainable Development of Transport in Poland in the Context of European Integration. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 624–630.

## Consumer Protection and the Portability Regulation

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### **Abstract**

*The author analyses the impact of the Portability Regulation [Regulation (EU) 2017/1128 of the European Parliament and of the Council of 14 June 2017 on cross-border portability of online content services in the internal market] on the rights of consumers guaranteed by the currently negotiated proposal for a Directive on certain aspects concerning contracts for the supply of digital content (Digital Content Directive). Both the Portability Regulation and the proposal for a Digital Content Directive address the issue of access to digital content from different perspectives and complement each other, although they use different legal terminology and in some respects have a different scope of application in the question of cross-border portability of the digital content provided for monetary counter performance to consumers. The author aims to answer whether a consumer who is not allowed to use the digital content in other EU Member States besides the Member State of his residence will be entitled to pursue claims arising from the non-conformity of the digital content with the contract.*

**Keywords:** consumer protection, cross-border issues, digital content directive, licence agreements, portability regulation

**JEL Classification:** K12, K11, D18

### **1. Introduction**

Differences in the laws of the EU Member States regarding national consumer protection and contract law are seen as the main obstacle which prevents consumers from enjoying the full benefits of cross-border e-commerce with digital assets and also as a serious barrier for business operators who must adapt their services to different legal conditions set by the national legislations (Arnerstål, 2015, p. 882; Helberger et al., 2013, p. 42) in the field of contracts, consumer or copyright protection (Loos et al., 2011, p. 14, 39, 102).

From the legal perspective, we can see several phases where EU law interferes with the process of making digital content available to users (consumers). At the beginning of the regulatory chain, we find the legal regulation of rights which apply to digital content. In the middle of the distribution chain, we find the legal regulation of the (i) intermediaries; (ii) collecting societies; (iii) rights to access the digital content of libraries, universities, and research institutions; or (iv) legislation on audio-visual media suppliers [COM (2016) 287 final]. Last but not least, it is necessary to set forth rules for consumer protection in the digital market [COM (2015) 634 final], and in this regard to focus on the aspects of the portability and geo-blocking [Regulation (EU) 2017/1128; COM (2016) 289 final].

The aim of this paper is to analyse possible convergences of the current European Commission legislative proposal on adopting the “Digital Content Directive” [COM (2015) 634 final] and

its relation to the “Portability Regulation” [Regulation (EU) 2017/1128]. We will focus especially on the rights of consumers who use digital content in other EU Member States besides the state, where the subscriber has his or her actual and stable residence. To achieve the aim, we will use the method of the legal hermeneutics based on the interpretation of legal texts and their comparison.

### ***1.1 Digital Content Directive***

With the Digital Content Directive proposal, the European Commission is responding to the needs of the digital economy (Kerber, 2016, p. 759) in the area of private law. The proposal pursues a viable and a technology-oriented approach; it covers all types of digital content, harmonizes contractual aspects of B-2-C obligations (Kunesova In Kovarova/Melecky/Stanickova, 2016, p. 538) where the consumer’s counter performance is based on monetary payments or on providing personal data. Moreover the proposal intends to regulate consumer rights in case the digital content is not in conformity with the contract and stipulates consumer rights and remedies. The proposal is strongly inspired [COM (2015) 634 final, p. 2] by the provisions of the Commission’s proposal for a Regulation on a Common European Sales Law which was intended to constitute an optional instrument that would actually create a parallel contract-law regime to coexist alongside national contract-law provisions (Beale, 2013, p. 22 ff.; Twigg-Flesner, 2013, p. 45 ff.).

The Digital Content Directive proposal has a broad scope which will be applied on different types of contracts concerning digital supply. This is one of the important distinctions (Zoll, 2016, p. 251) from the Online Sales Directive proposal [COM (2015) 635 final], which covers just the contract of sales [Art. 2 (a) Online Sales Directive]. The proposal also does not differentiate between the categories of digital content, because such differentiation in the field of rapidly evolving technologies would probably lead to discrimination between suppliers (Recital 11 Digital Content Directive). Therefore all kinds of data, copyrighted works (films, music, photos, computer games), as well as all possible forms of digital content provided by consumers (blogs, discussion forums, text-based collaboration formats etc.) are covered by the material scope of the directive, no matter if they are available on-line or if the digital content is contained on CDs or DVDs [Article 3 (3) and Recital 11 of the Digital Content Directive].

In a similarly broad manner, the Commission regulates types of contracts with regard to counter performance. The Commission treats contracts in which a consumer provides personal data as contracts for consideration (Recital 13 Digital Content Directive). Although the consumer receives digital content from the supplier for free, if he or she gives access to his or her personal or other data, the contracts will fall under the material scope of the directive proposal (Beale, 2016, p. 13).

Finally, the directive is not intended to have any effect on copyright issues (Recital 21 Digital Content Directive), especially on the distribution right applicable to digital goods under the copyright law (Recital 12 Digital Content Directive). Thus, all questions concerning digital rights management systems, as well as the effects of the principle of exhaustion, are omitted. The consumer therefore cannot argue that the limitations on further use of the digital content (such as the re-sale or lending of e-books) are not in conformity with the contract since the consumer, upon receiving the digital content, is not entitled to further distribution of the copyrighted content due to the copyright limitations, which are still applicable.



## **1.2 Portability Regulation**

Portability is positively characterized as the ability “to play, listen, and watch digital content on different kinds of devices, to lock-in or lock-out situations that are the result of product bundling or interoperability issues, social exclusion, and geographical impediment because of region coding and restrictive licencing practices” (Helberger et al., 2013, p. 40).

Portability reflects consumers’ natural expectations that the digital content, which covers many kinds of “intangible assets”, will be available across borders. If consumers complain [SWD (2015) 270 final, p. 3, 6] about territorial restrictions on the broadcasting of copyrighted works or sporting events applied by the suppliers, we can remark that consumers are merely applying their “common sense”. They see no relevant reason for the lack of availability of digital content in the Digital Single Market (or even in the global market), even though they know nothing about the theoretical aspects of intangible assets (non-rivalrous, ubiquitous; Merges, 2011, p. 36, 57; Cooter/Ulen, 2012, p. 40).

The Portability Regulation removes barriers to cross-border portability and prohibits the implementation of geo-blocking [SWD (2015) 270 final, p. 3, 6, 55; Hoffman, 2016, p. 16] measures within the EU Digital Single Market. This should enable the digital content consumers who subscribed to content services in the Member State of their permanent residence to receive a service or a download of pre-paid content, in a country which they are temporarily visiting. Further, the Portability Regulation targets the illegal use [COM (2015) 626 final, p. 4, 11] of copyrighted content which is currently supported by the use of geo-blocking practices. Consumers who do not have access to legally obtained copyrighted works because they are distributed in the EU on a territorial basis tend to use the digital content from illegal sources (Hoffmann, 2016, p. 152).

## **2. Digital Content Directive and Portability Regulation Overlaps**

Both proposals regulate similar issues related to consumers’ expectations that they will be able to effectively use digital content without technological, functional or cross-border restrictions. The question of cross-border availability is the key subject matter of Art. 3 (1) of the Portability Regulation, and might also be seen as an “accessibility” issue and therefore be subsumed under the concept of “conformity of the digital content with the contract” within Art. 6 (1) (a) of the Digital Content Directive.

It is obvious that the Digital Content Directive regulates a considerably wider range of legal relations. The reason for this is that it applies to all contracts with digital content and is targeted not only at cross-border relations, but also at situations in which digital content is supplied by the content provider to the consumer within the territory of a state. Although the directive does not aim to regulate any intellectual property issues (Recitals 12 and 21 Digital Content Directive), the proposal for the Digital Content Directive will have a direct impact on copyright licences. This is because digital content is generally supplied based on licence contracts. Many service providers of digital content use contractual terms in which the user receives a limited licence to use the digital content. If you subscribe to Spotify, Netflix, iTunes or Google-Play, you enter into a licence agreement, not a purchase agreement. The content providers keep the intellectual property rights and provide the consumer a limited, non-exclusive, revocable licence to make personal, non-commercial use of the digital content (Arnerstål, 2015, p. 752; Loos et al., 2011, p. 14).

The impact of the Digital Content Directive on licence contracts will consist in definition of digital content, its integration into the consumer's digital environment, but especially in the

regulation of the rights the consumer will have if the digital content is not in conformity with the licence contract.

Compared with the wide range of consumer issues prescribed by the Digital Content Directive, the Portability Regulation creates new consumer rights for when a consumer uses digital services in a Member State of his or her “temporarily presence” [Art. 2 (4), Art. 3 (1) Portability Regulation]. Whereas the Digital Content Directive applies for domestic transactions as well as for cross-border transactions, the Portability Regulation is applicable only in the case of cross-border delivery of on-line services. On the other hand, the Portability Regulation lays down rules which are directly applicable not only to the service providers, but simultaneously to copyright holders. This is because geo-blocking practices are primarily asserted by a copyright or by the related rights holders [COM (2015) 627 final, p. 2, 4; Recital 10 Portability Regulation].

### **3. Non-Portability as the Non-Conformity with the Contract**

The obligation stipulated by Art. 3 (1) of the Portability Regulation that enables a “subscriber who is temporarily present in a Member State to access and use the online content service” makes the contract law in EU Member States “cross-border and consumer friendly” [SWD (2015) 274 final/2, p. 18].

The central role of European consumer law is to function as corrective justice (Micklitz, 1999, p. 167 ff.) and to protect the weaker party (Cherednychenko, 2007). Contractual dealings between consumers and suppliers must respect the legitimate interests of both parties and must reflect a fair balance between their legitimate interests. When assessing the fairness of consumer transactions, it is important to compare them with the principle of “reasonable expectation”. If a product or service does not meet the reasonable expectations of the consumer, such as the availability of a product in the required time and place, then the contract can no longer be assumed to reflect the consumer's free will to commit to the transaction (Helberger/Hugenholtz, 2007, p. 1082). In the event that a consumer cannot utilize a product in a way that corresponds to his or her reasonable expectations, we can find grounds under which the consumer can contest the conformity with the contract.

In practice we can identify three main conformity problems: (1) accessibility, functionality and compatibility issues, (2) insufficient quality, and (3) deficiencies, errors or other safety and security issues (Loos et al. 2011, p. 108). These challenges can be caused by matters such as lack of connectivity, the application of DRM mechanisms which create obstacles for the transfer of digital content from one device to another, incompatibility of formats and standards, or even the abuse of the copyright protection when prohibiting the consumer from making private copies of lawfully acquired software or film.

Portability matters [Art. 2 (6) Portability Regulation] are primarily concerned with “accessibility requirements” [Art. 6 (1) (a) of the Digital Content Directive]. From the perspective of accessibility, both the Portability Regulation and Digital Content Directive aim at facilitating access to digital content and they seem to be complementary. Although the Digital Content Directive does not mention the cross-border portability of digital content, it is obvious that the reasonable expectations of consumers on the accessibility of digital content in other EU Member states are supported by the Portability Regulation and the Digital Content Directive as well. We may conclude that the Portability Regulation should be considered as a special piece of legislation in terms of Art. 3 (7) of the Digital Content Directive.

For these reasons, a consumer's inability to access the digital content which was contractually provided in their home Member State while he or she is temporarily located in another Member State is to be considered a breach of "conformity with the contract" according to the objective criteria test regulated by Art. 6 (2) of the Digital Content Directive.

#### **4. Consumer's Remedies due to the Breach of the Cross-Border Portability**

If an online content service that is normally available to a subscriber in the Member State of his or her permanent residence is not accessible in other EU Member States [Art. 2 (6) Portability Regulation], it not only breaches Art. 3 (1) of the Portability Regulation, which entitles the consumer to have online access to digital content in other Member States, but also is not in conformity with the contract [Art. 6 (2) of the Digital Content Directive].

The hierarchy of remedies that the consumer may require is guaranteed at two levels. The basic remedy is that the consumer is entitled to have the digital content brought into conformity with the contract free of charge [Art. 12 (1) Digital Content Directive]. At the second level, the consumer is entitled to terminate the contract, request a price reduction, or claim damages.

In this regard, we can point to the criticisms of the hierarchy of remedies. In the sphere of remedies there are significant differences, thus the Online Sales Directive [Art. 9 (1), Art. 11] guarantees that a consumer may choose between the repair and the replacement of goods. It becomes evident that terminating a contract for the supply of digital content is effectively less harmful than terminating a contract for physical goods. In this respect it is argued that a consumer's option to immediately terminate a contract upon the breach of the conformity would enhance his or her negotiating position (Mak, 2016, p. 24).

Such criticism makes sense especially when we pay attention to portability issues. On the one hand, we can argue that if a supplier uses geo-blocking practices and the digital content is not available in another EU Member State, it is logical to remedy the situation by ensuring cross-border portability, since Art. 3 (1) of the Portability Regulation requires that the provider of an online content service will enable a consumer to access the online content service. On the other hand, we may ask why the consumer should be required to notify the provider in order to restore their access.

We believe that in the sphere of the portability of the copyrighted works a consumer should not first be forced to request that the provider enable cross-border portability, and only as a secondary claim be entitled to choose between terminating the contract and reducing the price. The Digital Content Directive should contain a rule that (in specific cases in which non-conformity with the contract represents a serious breach of the legal obligation arising from the special EU or national legislation) the consumer should be entitled to pursue a price reduction or termination of the contract as a first course remedy.

#### **5. Conclusion**

When we analyse the relation between the Digital Content Directive and the Portability Regulation we see that both proposals address the issue of access to digital content from different perspectives. The Portability Regulation focuses on the cross-border portability of digital content in other EU Member States [Art. 3 (1) Portability Regulation], while the Digital Content Directive specifies the consumer rights related to the distribution of digital content and subsumes the accessibility of the digital content under the notion of the "conformity of the digital content with the contract" [Art. 6 (1), (2) Digital Content Directive].

Based on the relation between the Portability Regulation and the Digital Content Directive we have come to the conclusion that the consumer will be entitled to pursue claims arising from the non-conformity of digital content with the contract, as provided by Art. 6 and 12 of the Digital Content Directive, in the event that he or she is not allowed to access digital services in states other than the Member State of his residence due to the application of geo-blocking measures by digital content providers. However, the hierarchy and structure of the consumer's claims should be more favourable. Hence the consumer should be entitled to terminate the contract as a first course remedy if he or she is not allowed to use the digital content in other EU Member States.

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### **References**

- [1] Arnerstål, S. (2015). Licensing digital content in a sale of goods context. *GRUR Int.*, vol. 64, iss. 9, pp. 882-888.
- [2] Beale, H. (2013). The CESL Proposal: An Overview. *Juridica International*. vol. 20, iss. 1, pp. 20-31.
- [3] Beale, H. (2016). *Scope of application and general approach of the new rules for contracts in the digital environment. Workshop of JURI-Committee of the European Parliament.* [online]. [cit. 2017-05-02]. Available at: [http://www.epgencms.europarl.europa.eu/cmsdata/upload/4a1651c4-0db0-4142-9580-89b47010ae9f/pe\\_536.493\\_print.pdf](http://www.epgencms.europarl.europa.eu/cmsdata/upload/4a1651c4-0db0-4142-9580-89b47010ae9f/pe_536.493_print.pdf)
- [4] Cherednychenko, O. (2007). *Fundamental Rights, Contract Law and the Protection of the Weaker Party: A Comparative Analysis of the Constitutionalisation of Contract Law.* München: Sellier.
- [5] Cooter, R., Ulen, T. (2012). *Law & Economics.* Boston: Addison-Wesley.
- [6] Helberger, N. et al. (2013). Digital Content Contracts for Consumers. *Journal of Consumer Policy*, vol. 36, iss. 1, pp. 37-57.
- [7] Helberger, N., Hugenholtz, P. B. (2007). No place like home for making a copy: private copying in European copyright law and consumer law. *Berkeley Technology Law Journal*, vol. 22, iss. 3, pp. 1061-1098.
- [8] Hoffman, J. (2016). Crossing Borders in the Digital Market: A Proposal to End Copyright Territoriality and Geo-Blocking in the European Union. *George Washington International Law Review*, vol. 49, iss. 3, pp. 143-173.
- [9] Kerber, W. (2016). Governance of Data: Exclusive Property vs. Access. *IIC - International Review of Intellectual Property and Competition Law*, vol. 47, iss. 7, pp. 759-762.
- [10] Kovářová, E., L. Melecký and M. Staničková (eds.). *Proceedings of the 3rd International Conference on European Integration 2016.* Ostrava: VŠB - Technical University of Ostrava, 2016.
- [11] Loos, M.B.M. et al. (2011). *Analysis of the applicable legal frameworks and suggestions for the contours of a model system of consumer protection in relation to digital content contracts* [online]. [cit. 2018-05-02]. Available at:

- [http://ec.europa.eu/justice/newsroom/consumer-marketing/events/digital\\_conf\\_en.htm](http://ec.europa.eu/justice/newsroom/consumer-marketing/events/digital_conf_en.htm)
- [12] Mak, C. (2016). *The new proposal for harmonised rules on certain aspects concerning contracts for the supply of digital* [online]. [cit. 2018-05-02]. Available at: <http://www.europarl.europa.eu/supporting-analyses>
- [13] Merges, R. P. (2011). *Justifying Intellectual Property*. Cambridge (USA): Harvard University Press.
- [14] Micklitz, H. W. (1999). Principles of Social Justice in European Private Law. *Yearbook of European Law*, vol. 19, iss. 1, pp. 167-204.
- [15] *Proposal for a Directive of the European Parliament and of the Council on certain aspects concerning contracts for the online and other distance sales of goods from 9.12.2015*. COM (2015) 635 final [online]. [cit. 2017-05-02]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2015%3A635%3AFIN>
- [16] *Proposal for a Directive of the European Parliament and of the Council amending Directive 2010/13/EU on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services in view of changing market realities from 25.5.2016*. COM (2016) 287 final [online]. [cit. 2017-05-02]. Available at: [http://eur-lex.europa.eu/procedure/EN/2016\\_151](http://eur-lex.europa.eu/procedure/EN/2016_151)
- [17] *Proposal for a Directive of the European Parliament and of the Council on certain aspects concerning contracts for the supply of digital content from 9.12.2015*. COM (2015) 634 final [online]. [cit. 2017-05-02]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2015:0634:FIN>
- [18] *Proposal for a Regulation of the European Parliament and of the Council on addressing geo-blocking and other forms of discrimination based on customers' nationality, place of residence or place of establishment within the internal market and amending Regulation (EC) No 2006/2004 and Directive 2009/22/EC from 25.5.2016*. COM (2016) 289 [online]. [cit. 2017-05-02]. Available at: [http://eur-lex.europa.eu/procedure/EN/2016\\_152](http://eur-lex.europa.eu/procedure/EN/2016_152)
- [19] *Proposal for a Regulation of the European Parliament and of the Council on ensuring the cross-border portability of online content services in the internal market from 9.12.2015*. COM (2015) 627 final [online]. [cit. 2017-05-02]. Available at: <http://eur-lex.europa.eu/legal-content/EN/HIS/?uri=celex:52015PC0627>
- [20] *Proposal for a Regulation of the European Parliament and of the Council on a Common European Sales Law*. COM (2011) 635 final [online]. [cit. 2017-05-02]. Available at: <http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:52011PC0635>
- [21] *Regulation (EU) 2017/1128 of the European Parliament and of the Council of 14 June 2017 on cross-border portability of online content services in the internal market* [online]. [cit. 2017-05-02]. Available at: [http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=uriserv:OJ.L\\_.2017.168.01.0001.01.ENG](http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=uriserv:OJ.L_.2017.168.01.0001.01.ENG)
- [22] Twigg-Flesner, CH. (2013). *The Europeanisation of Contract Law. Current controversies in law*. 2nd ed. London (UK), New York (USA): Routledge.
- [23] Zoll, F. (2016). The Remedies in the Proposals of the Only Sales Directive and the Directive on the Supply of Digital Content. *Journal of European Consumer and Market Law*, vol. 5, iss. 6, pp. 250-254.

## **The Age Structure Analysis of Asylum Applicants Coming to the European Union from Sub-Saharan Africa's Countries**

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### **Abstract**

*Mobility is one of the universal features of human species. People have been migrating since the beginning of time. Because of existence of international borders, migration is not considered a matter of course in presence as in the past. European society faces new challenges concerning immigration due to unstable situation in Middle East and non-acceptable living conditions in Sub-Saharan Africa. The number of people coming to the European Union from these two regions has increased in a dramatic way recently. Total number of the asylum applications registered in the EU Member States reached 1,259 million in the year 2016. Aim of the paper is to bring the overview of the number of asylum applicant coming to the EU from Sub-Saharan Africa's countries between years 2008-2016 and to identify their age structure with the use of methods of descriptive statistics. Results of the analysis are interpreted in wider context and emphasize the child immigration to the EU as a new phenomenon.*

**Keywords:** *Asylum applicants, Child migration, European Union, Refugee, Sub-Saharan Africa*

**JEL Classification:** *F22, J15, O15*

### **1. Introduction**

Mobility is one of the universal features of human species. People have been migrating since the beginning of time. Movement has been permanent phenomenon throughout the human history. Because of existence of international borders, migration is not considered a matter of course in presence as in the past. Policy and economic barriers existing in current world constrained natural human ambition to reach better living conditions.

If migration is discussed by the general public, it is usually understood in terms of migration from developing countries to rich countries in Europe and North America. This misleading interpretation is based on the fact that on average three quarters of international migrants come to a country with a higher level of human development than their country of origin has. However, countries with higher level of human development do not have to be understood simply as countries in Europe or North America. South-North migration flows represent only one third of international migration. In 2015, more than 243 million people could be classified as international migrants, and only 50 % of them lives in Europe and North America. At the same time, international migrants coming from these two regions represented 26 % of all international migrants (UNICEF [online], 2016).

In recent years, the number of immigrants coming to Europe has increased in dramatic way – including both refugees and economic migrants (Nová, 2016). They come from two regions,

located not far from Europe – Middle East and Sub-Saharan Africa. Immigrants coming from the former one are usually considered (with regard to the actual insecurity there) refugees and need special treatment, but those coming from the latter one are usually considered economic migrants coming to Europe because of non-acceptable living conditions there. The European Union has been hit by the current migration wave especially since the year 2014 when the number of asylum seekers coming from Sub-Saharan Africa registered in the EU Member States started to increase.

## **2. Methodology and Research Objectives Formulation**

Enormous number of studies concerning international migration is found in many scientific journals indexed in the most famous databases. As a discussion topic, migration attracts attention of many serious conferences as well as public meetings. Many official documents and statistical reports complete actual feature of the phenomenon of international migration and highlight its urgency.

International migration is multidimensional phenomenon that has been an integral part of the history and presence of human society. It is examined in many consequences and with the use of qualitative as well as quantitative methods. Less research attention is focused on international child migration despite increasing number of children living outside their country of origin. They move for the same reasons as adult migrants, but their mobility follow their parents' mobility and their aspiration for better life.

The aim of the paper is to bring the overview of the number of asylum applicants coming to the European Union from Sub-Saharan Africa's (SSA) countries between years 2008-2016 and to identify their age structure with the use of methods of descriptive statistics. Results of the analysis are interpreted in wider context and emphasize the child immigration to the EU as a new phenomenon. Paper's conclusions are based on a review of relevant scientific sources as well as on own analysis of statistical data concerning immigration to the EU Member States within specified period that was reported by Eurostat in September 2017 within the theme Asylum and first time asylum applicants from Extra-EU28 countries.

Analysis is divided into three parts. First defines term SSA's asylum applicant. Second presents data concerning the total number of asylum applications registered in the EU Member States between years 2008-2016 and those submitted by immigrants coming from SSA's countries. Third part deals with the age structure of asylum applicants coming from SSA and emphasizes increased number of child asylum applicants. Paper also opens briefly discussion on bidirectional relation between migration and development.

## **3. Empirical Analysis of the Age Structure of Asylum Applicants Coming to the EU from Sub-Saharan African Countries**

The European Union is generally understood as a developed region of the world economy with high standard of living and social welfare system. Its economic, political and social stability is attractive not only for people coming from other developed regions, but also for those coming from less developed ones or regions affected by various forms of insecurity. If people are mobile in industrial countries, one usually speaks enthusiastically about flexible labour markets (Ellis, 2003), and whole migration between developed countries is considered to be natural process. However, migration to developed countries from the less developed ones is usually interpreted in negative terms. Regardless immigrants' countries of origin and causes of migration, it is automatically supposed that they are economic migrants wanting to obtain

social benefits offered in the European Union. However, in many cases, people coming to the EU are eligible to obtain refugee status.

### ***3.1 Definition of the Sub-Saharan Africa's Asylum Applicants***

According to the 1951 Refugee Convention (known as Geneva Convention) a refugee is someone who owns well-founded fear of being persecuted for reasons of race, religion, nationality membership of a particular social group or political opinion. When people flee their own country and seek sanctuary in another country, they apply for asylum, understood as the right to be recognized as a refugee and receive legal protection and material assistance (UNHCR, 2018). The European Union, based on full and inclusive application of Geneva Convention, means an asylum applicant (AP) a person having submitted an application for international protection or having been included in such application as a family member.

Because of extreme vulnerability, child refugees are eligible to be guaranteed extraordinary treatment in international scene. EU Directive 2011/95 recognizes principle the best interests of the child that should be a primary consideration of the EU Member States when implementing this directive concerning refugees. With respect to the UN Convention on Rights of the Child, a child means every human being below the age of eighteen years unless the law applicable to the child, majority is attained earlier (UN, 1989). This Convention (in Article 22) also states that signatories shall take appropriate measure to ensure that a child who is seeking refugee status, or who is considered a refugee in accordance with applicable international or domestic law and procedures, shall receive appropriate protection and humanitarian assistance.

Paper focuses primarily on migrants coming to the EU from Sub-Saharan Africa. Political instability, frequent civil and ethnic wars, human rights violations have been present in many SSA's countries since the downfall of colonial system. South Sudan, Democratic Republic of Congo, Central African Republic are typical examples of the SSA's tragic history and presence. Sub-Saharan Africa is quite frequent term used in various circumstances. However, each researcher covers different number of states with this regional or socio-economic designation. Eurostat does not recognize explicitly Sub-Saharan Africa as defined region when reporting data on migration. In the paper, own definition of SSA is applied and this term covers 49 countries, namely: Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Congo Dem. Rep., *Côte d'Ivoire*, Djibouti, Eritrea, Ethiopia, Equatorial Guinea, Gabon, Gambia, Ghana Guinea, Guinea-Bissau, Lesotho, Liberia, Kenya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe.

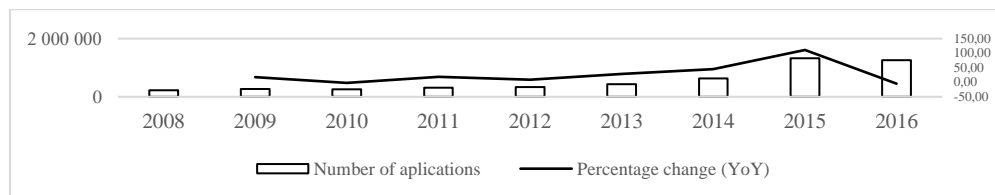
### ***3.2 Asylum Applicants in the EU Member States***

Total number of asylum applications registered in the EU 28 Member States has increased in recent years. However, in the 1990s, the EU faced similar phenomenon. Because of political crises and armed conflicts, number of new asylum applications started to grow in 1987, where the peak was reached in 1992 when EU 15 Member States registered about 700 thousand applications. In the second half of the 1990s, number of application permanently declined. Between years 1998 and 2003, EU15 recorded from 300 to 400 thousands asylum applicants annually. Since 2004, significant drop was monitored and the EU 27 Member States registered 192 300 new asylum applications in 2006 (Juchno, 2007).



Between years 2008-2012, total number of asylum applications submitted in the EU Member States was growing slowly because of increased migration especially from unstable Middle East, and poor Sub-Saharan Africa. Year over year changes in the number of registered asylum seekers started to grow in 2013. In 2014, the EU recorded more than 600 thousand asylum applicants and in 2015 their number doubled to 1,300 thousand (see Figure 1).

**Figure 1: Number of Asylum Applicants in EU Countries**



Source: Eurostat (2017), own data processing

However, beginning of the refugee crisis was evident worldwide. In 2015, every minute 30 people had to flee from their homes. 55 % of all refugees worldwide came from three countries – Syria (5.5 million), Afghanistan (2.5 million) and South Sudan (1.4 million). Majority of refugees stayed in countries neighbouring with their country of origin. The largest number of asylum seekers was registered in Turkey (2.9 million) and Pakistan (1.4 million). Only one EU Member State – Germany – belonged to the top 10 refugees' hosting countries.

In 2015, more than 5,300 thousand refugees coming from Africa were registered worldwide, but at the same time, 4,800 thousand of them applied for asylum in another African country. In Africa, important phenomenon is present – some countries serve as host countries for refugees but also as countries, which citizens flee them because of violence and non-acceptable living conditions. Only a minority of SSA asylum seekers comes to Europe annually. Total number of asylum applicants coming to the EU Member States from SSA's countries varied within the period of years 2008-2016. It exceeded 100 thousand for the first time in the year 2014, when growing between years 2013-2014 by 56 %. Although the total number of asylum applicants was lower in the year 2016 than in the year 2015 by 4.75 %, number of asylum seekers from SSA continued to grow and accounted for 200 thousands (see Tab.1).

**Table 1: Asylum Applicants from SSA and Total Number of Asylum Applicants from Third Countries**

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total number of APs	225 150	263 835	259 400	309 040	335 290	431 090	626 960	1 322 825	1 259 955
Number of APs from SSA	68 595	75 650	61 660	84 435	72 925	97 000	152 245	167 315	219 330
Percentage share	30.47 %	28.67 %	23.77 %	27.32 %	21.75 %	22.50 %	24.28 %	12.65 %	17.41 %

Source: Eurostat (2017), own data processing

Although the absolute number of asylum seekers coming to the EU from SSA has been growing since 2010, share of SSA's applicants in total number of asylum applicants declined in 2015 and 2016. It is caused by increased number of refugees coming to the EU from Middle East countries.

### 3.3 Age Structure of Asylum Applicants Coming to the EU from SSA

Communication from the European Commission to the European Parliament and the Council (Brussels, 12 April 2017, p. 2) starts: *In recent years, the number of children in migration arriving in the European Union, ..., has increased in a dramatic way. In 2015 and 2016, around thirty percent of asylum applicants in the European Union were children. There has been a six-fold increase in the total number of child asylum applicants in the last six years.* Regardless the country of origin, the number of child asylum applicants in the EU Member States grew between years 2008-2016 (see Tab. 2). On average, 1 in 5 asylum applicants was a child in 2008, while 1 in 3 in 2016.

**Table 2: Child Asylum Applicants from Third Countries**

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Child APs	46 530	62 670	71 395	75 915	92 450	116 820	160 140	384 935	398 110
Percentage share in all APs	20.67	23.75	27.52	24.56	27.57	27.10	25.54	29.19	31.60

Source: Eurostat (2017), own data processing

Age structure of asylum seekers coming from Sub-Saharan Africa differs from the age structure of all asylum applicants. On average, percentage share of SSA's child asylum applicants in all SSA's asylum applicants is lower than the average percentage share is. It has not exceeded 22 % since the year 2011 (see Tab. 3).

**Table 3: Age Structure of Asylum Applicants from SSA's Countries**

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Child APs	13.94	19.41	22.71	16.71	20.14	17.72	16.20	19.08	16.29
Adult APs	86.06	80.59	77.29	83.29	79.86	82.28	83.80	80.92	83.71

Source: Eurostat (2017), own data processing

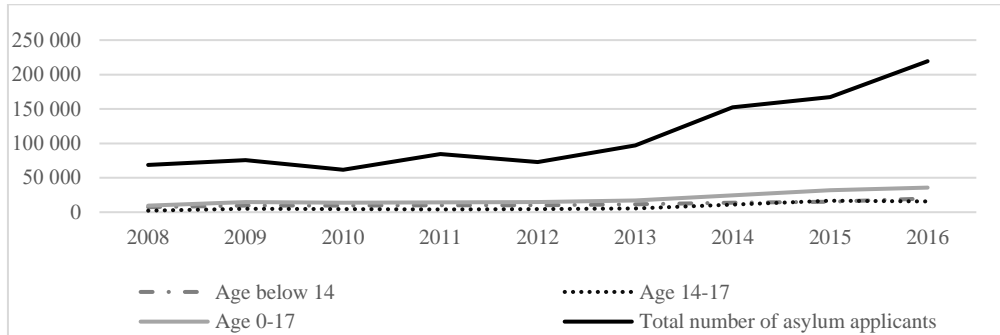
Deeper analysis (see Tab. 4) reveals that the percentage share of child asylum applicants coming from SSA's countries is lower also when two age sub-groups are observed.

**Table 4: Percentage Share of Child APs from SSA in Comparison to all Third Countries**

	2008	2009	2010	2011	2012	2013	2014	2015	2016
SSA's child asylum applicants (in % of all asylum applicants)									
Age below 14	10.71	12.54	15.59	11.90	14.04	11.96	9.10	9.12	9.08
Age 14-17	3.24	6.88	7.11	4.81	6.10	5.76	7.10	9.97	7.21
Child asylum applicants from all third countries (in % of all asylum applicants)									
Age below 14	15.03	16.70	20.35	17.99	20.79	21.14	18.87	19.41	23.18
Age 14-17	5.64	7.05	7.18	6.58	6.78	5.96	6.67	9.69	8.42
Gaps third countries-SSA (percentage points)									
Age below 14	4.32	4.16	4.75	6.09	6.75	9.18	9.77	10.29	14.10
Age 14-17	2.40	0.18	0.06	1.76	0.69	0.21	-0.43	-0.28	1.21

Source: Eurostat (2017), own data processing

Data reveals only two exceptions – years 2014 and 2015, when percentage share of SSA's child applicants in all asylum applicants in the case of the second sub-group (age 14-17) was higher than the average percentage share, but identified gaps did not exceed 0.5 p.p. However, in absolute terms, the number of SSA's child asylum applicants has been growing since the year 2008 (see Figure 2).

**Figure 2: Age Structure of Asylum Applicants from SSA**

Source: Eurostat (2017), own data processing

Development of the number of child asylum applicants is positively correlated with the development of the number of adult asylum applicants. Coefficient of correlation accounted for 0.96 for the period 2008-2016.

#### 4. Discussion

Because of increased migration flows between developed industrialized countries and developing countries, impressive research attention is paid to the interconnection between migration and development. Migration is not an exogenous variable. It is an integral part of wider social and economic development process and development impacts on migration are also fundamentally heterogeneous (De Hass, 2010). Many research studies provide evidence that international migrants do not come from the poorest and least development countries. Clements (2014) confirms that in the short and medium-term socio-economic development of a country tends to stimulate international migration. Clements continues that emigration generally rises with economic development until countries reach upper-middle income, and only thereafter falls. De Hass (2011) shows that the percentage of people moving abroad is higher in countries with a medium level of human development.

It opens space for discussion if the development cooperation – provided by developed countries to developing ones with the aim to promote their social and economic development - stimulates international migration or if it can solve uncontrolled South-North migration flows. Grege and Logožar (2017) found out that countries receiving higher development aid did not reduce international migration in a greater way than countries, which received less aid.

In the case of child asylum applicants coming to the EU Member States from Sub-Saharan Africa, statement that more migrants come from countries with medium level of development is not confirmed. The largest number of child asylum applicants comes from countries with low level of human development (see Tab. 5). Only Nigeria is - in comparison to other in Tab. 4 mentioned countries – the country with higher level of human development than the SSA's average level.

**Table 5: Main Source SSA's Countries for Child Asylum Applicants Coming to the EU**

Asylum Applicants	Period 2008-2012		Period 2013-2016	
	Country	HDI year 2010	Country	HDI year 2015
Age below 14	Somalia	N/A	Eritrea	0.42 (37)
	Nigeria	0.42 (21)	Somalia	N/A
	Congo DR	0.24 (44)	Nigeria	0.53 (18)
Age 14-17	Somalia	N/A	Eritrea	0.42 (37)
	Guinea	0.34 (32)	Somalia	N/A
	Congo DR	0.24 (44)	Gambia	0.45 (31)

Note: HDI means Human Development Index. Information in brackets refers to the country's rank between 46 SSA countries for which HDI is available.

Source: Eurostat (2017), UN Development Programme (2017), own data processing

Number of child migrants coming to the EU from SSA's countries with high level of human development (Seychelles and Mauritius) or medium level (Botswana, Gabon, South Africa, Cabo Verde, Namibia, Congo, Ivory Coast, Equatorial Guinea, Ghana, Zambia, Sao Tomé and Príncipe, Kenya) do not significantly contribute to the child migration flows between the European Union and Sub-Saharan Africa.

## 5. Conclusion

Between years 2008-2016, the number of migrants coming to Europe has increased. Asylum applicants coming to the EU Member States from Sub-Saharan Africa contributed to this growth less significantly than migrants coming from other third countries did. Their share in total asylum applicants declined in 2015 and 2016. Increase migration of children is the most serious phenomenon connected with current migration flows, because children are generally considered the most vulnerable group of society. Since the year 2008, number of child asylum applicant has increased in the EU Member States dramatically.

General public usually thinks that asylum applicants from SSA's countries has to be considered economic migrants seeking for better living conditions. Economic migration is stimulated by economic and social development in source countries. However, in the case of child migration from Sub-Saharan Africa to the EU data revealed that child asylum applicants came especially from countries with low level of human development affected by political or social insecurity and instability. Therefore, they have to be taken as refugees under international protection. This conclusion opens space for the further research looking for the existing patterns of the relation between international migration and livelihood strategies in SSA's countries with low level of human development.

## References

- [1] Clemens, M. (2014). Does Development Reduce Migration? *Working paper No 359*. Washington: Center for Global Development.
- [2] De Hass, H. (2010). Migration and Development: A Theoretical Perspective. *International Migration Review*, vol. 44, nr. 1, pp. 227-264.
- [3] De Hass, H. (2011). *Development lead to more migration* [online]. [cit.2017-05-06]. Available at: <https://www.unrefugees.org/refugee-facts/what-is-a-refugee/>.

- [4] Ellis, F. (2003). *A Livelihoods Approach to Migration and Poverty Reduction*. Paper commissioned by the Department for International Development (DFID), Norwich, UK.
- [5] European Commission (2017). *Communication from the Commission to the European Parliament and the Council. The protection of children in migration* [online]. [cit.2017-9-20]. Available at: [https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-migration/20170412\\_communication\\_on\\_the\\_protection\\_of\\_children\\_in\\_migration\\_en.pdf](https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-migration/20170412_communication_on_the_protection_of_children_in_migration_en.pdf).
- [6] Eurostat (2017). *Statistics* [online]. [cit.2017-9-22]. Available at: <http://ec.europa.eu/eurostat/data/database>.
- [7] Gregl, M. and K. Logožar (2017). The Impact of Development Aid on International Migrations in the African, Caribbean, and Pacific Group of States. *Zagreb International Review of Economics and Business*, vol. 20, iss. 1, pp. 101-112.
- [8] Juchno, P. (2007). Asylum Applications in the European Union. *Statistics in Focus*, nr. 110, pp.1-8.
- [21] Nová, M. (2016). Migration – Models and Principles of Immigrant Integration. In: *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 673–678.
- [9] UN High Commissioner for Refugees (2018). *What is a Refugee?* [online]. [cit.2017-01-20]. Available at: <https://www.unrefugees.org/refugee-facts/what-is-a-refugee/>.
- [10] UN Children’s Fund (2016). *UNICEF Data: Monitoring the Situation of Children and Women. Statistics by topic/Migration* [online]. [cit.2017-09-20]. Available at: <https://data.unicef.org/topic/child-migration-and-displacement/migration/>.
- [11] UN Development Programme (2017). *Human Development Reports* [online]. [cit.2018-04-07]. Available at: <http://hdr.undp.org/en/content/human-development-index-hdi>.
- [12] United Nations (1989). *Convention on the Rights of the Child* [online]. [cit.2017-01-20]. Available at: <http://www.ohchr.org/en/professionalinterest/pages/crc.aspx>.

## Migration from Bulgaria and Its Depopulation

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### **Abstract**

*Emigration from new EU member states in Central and Eastern Europe, especially the Baltic States and the Balkans has been fierce since their admission to the EU. Taking up the case of Bulgaria this paper, the actual situation. Beginning in the 21st century a huge amount of foreign direct investment has flowed into the country. However, it flowed mostly into real estate, finance, services, etc. and did not contribute to creation of employment opportunities so much. Massive outflow of young and educated people from the country is a serious problem. As the EU has given new EU member states only 'free mobility' in respect of labor but failed to create employment opportunity sufficiently in poorer member states its policy has collapsed. This paper argues that more active industrial policy by the Bulgarian government is required.*

**Keywords:** Bulgaria, depopulation, emigration, EU

**JEL Classification:** J61, P51, O52

### **1. Introduction**

People in the EU member states enjoy free mobility of labor, but migration from periphery to the EU's core such as Germany has been overwhelmingly frequent and migration from opposite direction has been less frequent. A population decrease in the Baltic States and the Balkans has been remarkable. The pace of people's outflow has been so rapid in some new EU member states (NMS) that there has been depopulation. Among them, young and educated people, who should shoulder the future development of these countries, have emigrated massively, posing a serious question.

I will discuss the case of Bulgaria. After having grasped the extent of a natural decrease in population and net emigration, I will consider causes of the massive emigration. Then I will briefly discuss emigrants' motivations and the government's countermeasures and conclude.

### **2. Population Dynamics in Bulgaria**

Bulgaria's population, which was 8.82 million in 1990 immediately after the system change, has drastically decreased by 1.6 million to 7.20 million in 2014 within a quarter century (Table 1). It was a very rapid decrease in population. Two factors can be mentioned for the decrease in population: First, the birth rate began to fall short of the death rate in 1990 at the latest (I mention 1990 because only data of every five years is available, but possibly the birth rate might begin to fall short of the death rate in somewhere between 1986 and 1990.). Since then the birth rate has consistently been less than the death rate, and a natural decrease in population has been continuing; Second, the emigration to foreign countries has been exceeding the immigration from foreign countries, and therefore a net outflow of people has been continuing.

**Table 1: Population Dynamics in Bulgaria**

Year	Population	Fertility rate	Birth rate (per 1,000)	Death rate (per 1,000)	Natural increase or decrease (per 1,000)	Migration (net)
1945	6,936,000	3.09	24.1	14.9	9.1	n.a.
1950	7,251,000	2.94	25.2	10.2	15	n.a.
1955	7,541,295	2.53	20.1	9.1	11.1	-23,600
1960	7,866,472	2.3	17.8	8.1	9.7	-8,700
1965	8,206,564	2.53	15.3	8.2	7.2	-23,600
1970	8,494,765	2.13	16.3	9.1	7.3	-1,300
1975	8,727,332	2.16	16.6	10.3	6.3	-8,700
1980	8,865,235	2.19	14.5	11.1	3.4	-19,000
1985	8,960,387	2.01	13.3	12	1.3	-4,500
1990	8,821,111	1.95	12.1	12.5	-0.4	-36,800
1995	8,358,116	1.55	8.6	13.6	-5	-71,300
2000	8,000,510	1.2	9	14.1	-5.1	-21,300
2005	7,682,614	1.24	9.2	14.6	-5.4	-16,600
2010	7,407,297	1.5	10	14.6	-4.6	-16,600
2011	7,348,000	n.a.	n.a.	n.a.	n.a.	n.a.
2012	7,305,000	n.a.	n.a.	n.a.	n.a.	n.a.
2013	7,246,000	n.a.	n.a.	n.a.	n.a.	n.a.
2014	7,202,000	n.a.	n.a.	n.a.	n.a.	n.a.
2015	7,149,787	1.52	9.2	15.3	-6.1	-10,000
2016	7,097,796	1.54	n.a.	n.a.	n.a.	n.a.

Note: As for 1945, 1950, 2011, 2012, 2013 and 2014, approximate figures.

Source: Prepared by the author by combining two tables from the Bulgarian Statistical Institute.

Source: <http://worldometers.infor/world-population/bulgaria-population/>;

[https://en.wikipedia.org/wiki/Demographics\\_of\\_Bulgaria](https://en.wikipedia.org/wiki/Demographics_of_Bulgaria); Original source: <http://www.nsi.bg>

Since the system change the fertility rate continued to decrease in the 1990s. It seems that the phenomenon reflected people's intensifying anxiety about their future in the prolonged transformational recession. The fertility rate decreased to 1.20 in 2000, and then it has recovered to more than 1.5 in 2015, supposedly reflecting an improvement of people's lives.

In 2016 the number of people who emigrated from Bulgaria was 30,570 and the number of people who immigrated into Bulgaria (including both Bulgarians and foreigners) was 21,241, therefore net outflow of people was 9,329 (Table 2). In that year the total population has decreased by 51,991 from the previous year. The net outflow of people does not seem to be a significant factor because it is only about 18% of the total decrease in population. In my interview of September 2017 Dimiter Ialnazov says that the number of people's outflow which the Bulgarian Statistical Bureau announced is smaller than the actual outflow. According to him, there are people who have emigrated without procedures of a change of address. Anyway, looking at only Bulgarians, the difference between immigration (including return immigration) and emigration, i.e. the net people's outflow is 16,541 and contributes to a third of the total decrease in population. This is not a negligible number.

**Table 2: Bulgaria's International Migration in 2016 by Age and Nationality of Emigrants and Immigrants**

Age	Immigration					Emigration				
	All	Bul- garia n	Others	of which		All	Bul- garian	other s	of which	
				EU citize n	Non- EU citize n				EU citize n	Non- EU Citize n
<b>Total</b>	<b>21,241</b>	<b>9,254</b>	<b>11,987</b>	<b>1,310</b>	<b>10,677</b>	<b>30,570</b>	<b>25,795</b>	<b>4,775</b>	<b>752</b>	<b>4,023</b>
0-4	1,201	321	429	15	421	602	530	105	7	98
5-9	779	200	458	7	443	727	622	78	4	74
10-14	585	439	385	49	378	937	859	135	19	116
15-19	989	569	550	76	501	2,095	1,960	809	114	695
20-24	1,450	875	881	68	805	4,701	3,892	769	74	695
25-29	1,807	921	932	93	864	4,653	3,884	499	75	424
30-34	1,984	932	1,063	91	970	3,853	3,354	404	79	325
35-39	1,940	735	1,008	119	917	3,148	2,744	363	88	275
40-44	1,820	592	1,085	158	966	2,620	2,257	319	67	252
45-49	1,597	544	1,005	164	847	1,954	1,635	301	87	214
50-54	1,464	600	920	139	756	1,444	1,143	259	58	201
55-59	1,606	690	1,006	123	867	1,170	911	231	28	203
60-64	1,598	769	908	111	785	905	674	211	26	185
65-69	1,506	295	737	89	826	763	552	220	19	201
70+	915		620		531	998	778			

Source: Republic of Bulgaria National Statistical Institute.

<http://www.nsi.bg/en/content/6685/migration-population-districts-municipalities-and-sex>

According to Mara and Landesmann (2016), net emigration from Bulgaria to EU-15 for 16 years from 2000 through 2015 is about 400 thousand, but this number does not include people who have emigrated to countries other than EU-15. In addition, there are people who have emigrated to foreign countries before that period. Bakalov and Borisova (2013) estimate that at present expatriate Bulgarians amount to about a million.

According to Mitev and Kovacheva (2014), in the 1990s, especially after the economic crisis in 1996/97 there was an emigration boom due to sudden impoverishment. In the 21st century there have been post-transition emigration flows. Push factors are the continuation of poverty and low living standards, the job losses due to de-industrialization. In addition, young people's willingness to study abroad is mentioned. Let us see the actual situation of Bulgaria's transition.



### 3. The Actual Situation of Transition to a Market Economy in Bulgaria

Taking up Poland as a benchmark of Central Europe, I will compare Bulgaria with it. In Poland the transformational recession was shortest and shallowest, and the economy picked up in 1993. The economy has been continuing to grow steadily without recording negative growth. In the case of Poland, Inward FDI in various area of the economy including manufacturing has led the economic development. In contrast to Poland, the transformational recession has prolonged in Bulgaria. Although there was feeble economic recovery in the mid-1990s, the country experienced the second transformational recession from 1996 through 1997. After that its economy began to grow, but it suffered a major damage by the 2008-2009 global financial crisis, and its GDP declined by 3.5% in 2009. Its economy has been quite vulnerable to changes in external environment.

The World Economy Research Institute at Warsaw School of Economics publishes *Poland Competitiveness Report* every year and indicates to what extent NMSs in Central and Eastern Europe have converged on the average of EU-15. The report compares NMSs by per capita GDP at purchasing power parity with Poland being 100 (p. 20). From here we can find that all NMSs in Central and Eastern Europe have more or less experienced transformational recession but have accomplished economic growth and reduced gaps between them and the average of EU-15. Although most of them (excluding Poland) experienced negative economic growth from 2008 through 2009 (or 2010), they regained economic growth and reduced the gaps. Among them Bulgaria needs special attention. Although the Bulgarian economy exceeds the level of 1989 in absolute term, even in 2015 the country could not reduce the gap between itself and the average of EU-15 that was recorded in 1989, and it is only country which has been rather outdistanced by the average of EU-15.

During the socialist period Bulgaria totally relied on markets of the Soviet Union and COMECON. It has been a predominantly agricultural country with industry being developed to a certain extent. Above all, heavy industry such as steel industry and non-ferrous metallurgy have developed, and their products were mostly exported to the Soviet Union and COMECON countries. After the system change exports to these countries have drastically decreased. Food processing industry and tobacco industry suffered from the loss of markets of the Soviet Union and COMECON. Even if these industries tried to challenge the West European markets they would not be competitive in terms of quality. There seem to be serious problems in agriculture and rural areas in the country.

### 4. Situation in Agriculture and Rural Areas

In the early 1990s the government aimed at creation of market-based agriculture in line with neoliberalism. Privatization was implemented, but the implementation proved more difficult in Bulgaria than other countries in Central and Eastern Europe. Existing Kolkhoz (Soviet collective farm)-type agricultural cooperatives and Sovkhoz (Soviet state agricultural farm)-type agricultural enterprises were dismantled. Most of their equipment was sold. Farmland reform was implemented basically based on the principle of restitution. As a result, descendants of former owners of the farmlands have received the most of lands, but many of them have no experience of agriculture. In Ialnazov's opinion, the restitution of farmland met justice but it was not economically reasonable solution. According to Slavova (2012), as a result of the farmland reform, the ownership structure has been polarized as follows:

- Business-oriented farming – commercially-oriented farms
- Farming for survival – subsistence farms

About 75% of agricultural holdings account for less than 7% of the utilized agricultural areas. They cultivate plots of no more than one hectare. They are doing agricultural production mainly for home consumption. Agricultural productivity is low. The fragmentation of land ownership is a significant barrier to long-term investments in agriculture, and efficient use of agricultural machinery (World Bank, 2010). The agricultural production continued to decline year after year, and in 1996 it decreased to about 62% of the level of 1990. World Bank (2000) mentions the following causes for agricultural production: i) As subsidies were reduced considerably and the purchasing power of farmers fell, the quantity of fertilizer use declined precipitously; ii) Mechanization also declined, although not so dramatically; iii) As a result of privatization, many animals were put in the hands of farmers, but they were ill-equipped to care for animals, resulting in a rapid decrease in animals; iv) Sharp drops in demand for agricultural products due to a decline in inhabitants' purchasing power and disintegration of the traditional trading relations within COMECON as well as the Russian financial crisis in 1998.

As we have seen, the government did not have sensible policies for agriculture and rural areas at that time. In 1997 when Bulgaria was not a member states yet the EU began organizational aid to the country through 'the Special Accession Program for Agriculture and Rural Development (SAPARD). In spite of aid by the EU through SAPARD and Common Agricultural Policy (CAP), however, the Bulgarian agriculture has not begun powerful development yet. During the socialist period Bulgaria served as a food base for the whole COMECON countries. The trade balance in the area of agriculture had been surplus for a long time, but there was a downward trend in the amount of its surplus. Now Bulgaria is a net food-importing country.

Outflow of people, especially young people has been fierce. A natural decrease in population in rural areas has begun as early as the mid-1970s. In 1975 42% of Bulgarians lived in rural areas. At present about two million, i.e. 27.5% of total population live in rural areas, of which about a million are pensioners.

## **5. Admission to the EU and Bulgaria**

The admission to the EU has brought bright prospect and opportunities to the country, consequently increasing funds from the EU and FDI. Christova-Balkanska (2016), Senior Researcher at the Economic Institute of the Bulgarian Academy of Sciences, says that while funds from the EU and FDI play important roles in the conversion of the Bulgarian economy on the EU, both have problems. First, Structural Funds and Cohesion Funds of the EU are expected to contribute to the economic development of less developed member countries. According to her, in practice funds from the EU were not sufficiently effective because Bulgaria has consumed only 19% of the allocated sums in the years 2007-2013. Administrative and judicial officials have been so weak that there have been problems in the process of planning projects and funding, and therefore the absorption rate of the EU funds was quite low (For absorption rate, see Sediva Neckarova and Sedivy [online], 2016). Professor Ialnazov (Kyoto University) points out a problem that funds allocated from the EU have often been pilfered by politicians, bureaucrats and enterprises in the process.

Second, it is the period 2005-2007 that a large amount of FDI has flowed into the country. A significant share of FDI went into non-manufacturing industries (especially, construction, real estate and tourism), which caused consumption-led economic development and an economic bubble. Current account deficit in 2008 recorded 23.1% of GDP (see Table 3). I would like to add that although not included in this table current account deficit in 2007 was approximately 25% of GDP. And then came the Lehman shock in September 2008. As the demand from main

trading partners has decreased sharply the production activities in Bulgaria has decreased correspondingly. Also FDI inflow has decreased sharply. As import has decreased more greatly than export in 2009, trade deficit and current account deficit have decreased to 8.2% and 8.9% of GDP respectively. This trend continued for a while after that.

More than the half of the FDI stocks in the non-financial sector were concentrated in big cities such as Varna, Burgas and Plovdiv and the capital city Sofia. These big cities attracted 80% of the total stock of FDI. A problem is that countryside, especially in the northwestern part of the country has received almost no foreign capital. Christova-Balkanska says, “because FDI are concentrated in big cities, with an available labor force, in smaller towns and villages FDI cannot contribute to overcoming unemployment and to keeping the inhabitants in the places of birth, which undoubtedly affects and increases the intention for emigration of the young generation” (Christova-Balkanska, 2016, p. 59).

**Table 3: Main Economic Indicators of Bulgaria**

	1995	1997	2001	2008	2009	2010	2011	2012	2013	2014	2015
Real GDP growth	2.9	-7	4	5.8	-5.5	0.7	2.0	0.5	1.1	1.4	0.8
Private consumption	n.a.	n.a.	n.a.	3.7	-6.4	0.5	1.8	3.9	-2.3	1.4	0.8
Public consumption	n.a.	n.a.	n.a.	-1.1	-7.6	2.0	1.8	-1.0	2.8	2.1	0.2
Gross fixed capital form.	16.1	-23.9	19.9	22.0	-17.4	-18.3	-4.6	2.0	-0.1	2.3	-2.3
Export of goods & service	34.7	1.0	16.5	2.5	-11.7	17.2	11.5	0.8	9.2	0.3	3.0
Import of goods & service	35.2	-2.8	28.4	4.9	-21.5	4.1	8.5	4.5	4.9	1.2	2.0
Inflation rate	62.1	1082.3	7.4	12.0	2.5	2.9	3.4	2.4	0.4	-1.6	-0.5
Unemployment rate	11.1	13.7	17.3	5.6	6.8	10.3	11.3	12.3	13.0	11.7	10.9
Budget balance	-5.6	-3.1	-0.9	1.7	-4.3	-3.1	-2.0	-0.3	-0.4	-5.5	-1.7
Trade balance	-3.0	0.1	-15.9	-20.6	-8.2	-2.5	-5.4	-2.7	-5.9	-6.9	1.0
Current balance	-0.2	4.2	-6.1	-23.1	-8.9	-1.5	0.1	-1.1	3.0	0.1	0.4

Source: For the period 2008-2015, Christova/Balkanska (2016), p. 41; For the period 1995-1997 and the budget balance (the whole period), wiiw, Current Analysis and Forecasts, various issues. Except budget balance, trade balance and current account (which are % of GDP), annual change in %.

As for nominal convergence criteria, as far as declining percentage of price rise (rather deflation in recent years), decreasing budget deficit, declining public debt, etc. are concerned, the country fulfils the criteria. After the global financial crisis, however, the economic growth has been slow. It will be a long way to Bulgaria’s substantial convergence. Albeit declining in recent years, the unemployment rate is still recording a double-digit, working as a push factor for people’s emigration to foreign countries. Austerity which has been strongly recommended by the European Commission and the IMF is restricting the country’s economic development.

## 6. Motivations for Emigration and the Government’s Countermeasures

As for a recent trend in international migration, a study by Vanya Evtimova Ivanova (2012), Assistant Professor at New Bulgarian University, is useful. Based on her study, let us look at the recent trend. According to a survey conducted by the government in 2012, to an inquiry “what was the aim of going abroad”, 81% of the respondents mentioned Education, followed by Family reunification (8%) and Work (8%), Further qualification, fellowship (4%). It seems

that there is a great problem in the educational system in Bulgaria. According to Dimiter Ialnazov, in spite of the fact that the economic structure has been transformed from an economy with priority given to heavy industry in the socialist period into a service-oriented economy, the content of education does not meet requirements of the economy. Therefore, many young people went to universities in advanced countries in Europe and North America. Many parents have been encouraging their children to go abroad for education. According to a survey done at the end of September 2012, 14% of the Bulgarians have the intention to leave the country forever. This is 3% more compared to a similar survey done in November 2009 (Evtimova-Ivanova, 2012). To an inquiry about “Reasons to work abroad” (multiple answers are permissible), “Better professional realization” comes first with 52%, followed by “Better payment” (42%), “Don’t want to live in just one country” (31%), “Like risk and challenges” (29%), etc. Higher wages in EU-15 act as a pull factor.

There have been a substantial number of Bulgarians who have returned home. According to a survey conducted for Bulgarian residents abroad in 2010, Bulgarians who have stayed abroad for 5 years or more occupy 58% of total respondents, 4 years 17%, 3 years 12%, 2 years 10% and one year 4%. 3,518 Bulgarians changed their permanent address from abroad to Bulgaria in 2010. The number of men prevailed (54%). Among reasons for return migration, the most important is the impact of the global economic crisis on Europe and Bulgaria. Highly skilled migrants, who are often young and single migrants, may more easily stay abroad because of their good language skills and ability to quickly find another job. To the inquiry about reasons for return migration (multiple answers are permissible) “Graduated” comes first with 54%, followed by “Did not want to live abroad forever” (46%), “Contribute to a sector in Bulgaria” (40%), “Nostalgia (family and friends)” (31%), “Did not plan to stay longer abroad” (23%), “Interesting job offer in Bulgaria” (21%), “Start my own business” (17%), etc.

The government of Bulgaria have not overlooked people’s outflow and depopulation. Two strategical documents were adopted. National Strategy of the Republic of Bulgaria for Migration and Integration (2008-2015) was adopted in 2008. Then, National Strategy in the Field of Migration, Asylum and Integration (2011-2020) was adopted in early 2011. The core of both documents is to call Bulgarian residents abroad back to their mother country and strengthen the relation with Bulgarian residents abroad (diaspora). The most desirable from the standpoint of the government is that Bulgarian residents abroad will return home, or while staying abroad, making use of their own money, knowledge and network for development of the country. For this purpose, the State Agency for the Bulgarians Abroad (SABA) was established. SABA has created a separate database to collect information about the Bulgarian students abroad. The Ministry of labor and Social Policy (MLPS) held a job fair in Spain for workers who had intentions to return home. Taking into account the fact that the number of emigrants still exceeds the number of return migration, it seems that the government’s policies have not brought sufficient results yet.

## 7. Conclusion

First, Bulgaria’s transition has had serious problem resulting deindustrialization and devastated agriculture. Farmland reform, in particular, after the system change gave the agriculture severe blow. The restitution of farmland to former owners of the farmlands or their descendants was not economically reasonable solution. There emerged the polarization in which along with a small number of large-scale agricultural farm numerous small-scale agricultural farm exist. The government’s impractical policies for agriculture caused a decline in agriculture and distress in rural areas. Many young men flowed out of rural areas to cities and further to foreign countries in quest of jobs. Careful policies to develop rural area will be required.

Second, young people who have educated in cities also could not find enough employment opportunities in the country. The government of Bulgaria has so far been too faithful to neoliberal course. It will be necessary for the government to adopt active industrial policies in order to create employment opportunities.

Third, as the EU has given citizen of NMSs only ‘free mobility of labor’ but failed to create employment opportunities, the EU’s policy has collapsed. In the future it will be necessary for the EU to make step toward fiscal federalism and have an ample budget at the EU level with its own source of revenue enough to support less developed member states. However, in the current situation in which some member states make complaints against the EU budget of only 1% of GDP there is no way other than expecting private funds in richer member states to flow into less developed member states. Indeed, inward FDI is important for less developed member states, but it is insufficient for these member states to rely on inward FDI. It will be necessary to have a mechanism which will induce private funds to manufacturing in less developed member states under the EU’s guarantee. In that sense, ‘European Fund for Strategic Investment’ (EFSI; the so-called Juncker Plan) needs to be developed.

### References

- [1] Bakalov, Ivan and Nevenka Borisova (2013), Ghost villages and the slow death of rural Bulgaria, *Equal Times*, 31 October 2013 [online]. [cit.2017-08-30]. Available at <https://www.equaltimes.org/ghost-villages-and-the-slow-death?lang=en>
- [2] Christova-Balkanska, Iskra (2016), Bulgarian Economic Development and EU Integration. How FDI and EU Structural Funds Could Help This Process?, *Romanian Journal of Economics*, Vol. 42, pp. 36-70 [online]. [cit.2017-08-10]. Available at <https://ideas.repec.org/a/ine/journal/v42y2016i51p36-69.html>
- [3] Evtimova-Ivanova, Vanya (2012), Return Migration: Existing Policies and Practices in Bulgaria, Transatlantic Forum on Migration and Integration (2012), *Welcome home?: Challenges and Chances of Return Migration*[online]. [cit.2017-09-30]. Available at: [www.gmfus.org/file/2876/download1358538301tfmireturnmigration.pdf](http://www.gmfus.org/file/2876/download1358538301tfmireturnmigration.pdf)
- [4] SAPARD (2007), SAPARD and Rural Development: Background Information – Bulgaria – ESI [online]. [cit.2017-08-30]. Available at: <http://www.esiweb.org/index.php?lang=en&id=285>
- [5] Mara, Isilda and Michael Landesmann (2016), Free Movement of Persons to the UK and Its Implications for the Mobility of the EU-CEE Countries, *Forecast Report Autumn 2016*, wiiw.
- [6] Mitev, Petar-Emil and Siyka Kovacheva (2014), *Young People in European Bulgaria: A Sociological Portrait 2014*, Sofia: Friedrich Ebert Foundation Office Bulgaria.
- [7] Sediva Neckarova, Alice and Richard Sedivy (2016), Absorption Capacity of the Czech Republic to the European Union, International Conference on European Integration 2016, Ostrova: VSB-TU Ostrova, Faculty of Economics, pp. 953-960.
- [8] Slavova, Dilyana (2012), Bulgarian Agriculture: Reality and Opportunities, Presentation in Brussels [online].[cit.2017-08-10]. Available at <https://www.eesc.europa.eu/resources/presentation-by-mrs-slavova.pdf>
- [9] World Bank (2010), Bulgaria Public Expenditure Review for Agriculture and Rural Development, *Report No. 54903-BG*.
- [10] World Economy Research Institute at Warsaw School of Economics (2016), *Poland Competitiveness Report*.

# Personal and Psychological Motivators of European Players to Buy Virtual Goods in Free-to-Play Online Games: Czech and Russian Comparison

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## **Abstract**

*ESports or electronic sport is not only leisure time or working activity. ESports is a world of paid micro transactions of virtual goods. This contribution explores the shopping mechanism of virtual goods in paid micro transactions in the selected countries of the Europe. Primary online questioning led by author focuses on the personal and psychological factors affecting Czech players as the EU members and Russian players as the non-EU members to buy virtual goods in free-to-play online games. The identification of the significance of the factors is very important for increasing of the motivation to spend money in free-to-play online games. The article is driven to find out the differences between Czech players' perception of the personal and psychological motivators as the EU members and Russian players' perception of the personal and psychological motivators as the non-EU members. A structural equation modelling was used as the research method of analysis. The results confirm that psychological motivators drive virtual goods shopping mechanism of Czech players as the EU members as well as psychological motivators lead Russian players as the non-EU members. The contribution discusses the reasons of similarities.*

**Keywords:** *online games, perception of the EU members, perception of the non-EU members, shopping motivators, structural equation modelling*

**JEL Classification:** *C10, M31, M37*

## **1. Introduction of Topic**

Electronic sport (eSports) has been a growing phenomenon in players and audience over recent years (Llorens, 2017). ESports can be defined as competitive computer gaming (Seo, 2013). It has emerged as an important aspect of virtual-world consumption and the recording of certain eSports events have become worldwide mass events. (Seo, 2013; Llorens, 2017).

The example of an eSports worldwide success is the case of game called League of Legends (LoL) (Llorens, 2017). League of Legends, launched by Riot Games, has one of the biggest-in-the-world player base and the Riot Games executives confirmed that the game has 100 million monthly players. The eSports tournaments and player streams have got massive viewership on Twitch and YouTube (Tassi [online], 2016). Though League of Legends is an online free-to-play game, players spend a lot of money for virtual goods, such as new characters, skins items or map improvements.

The motivation of players to spend money in online free-to-play games is explored in this contribution. This research focuses on shopping mechanism of Czech players as the EU

members and Russian players as the non-EU members. Although these two countries share the same historical features, they are currently developing differently and their membership and non-membership in the European Union is one of the major factors influencing the development of these countries. The prior studies confirm that geographic comparison of consumers' behaviour and perception of different topics is very useful (Velčovská and Hadro, 2018; Pawlasová, 2016; Velčovská and Klapilová Krbová, 2016; Pawlasová, Spáčil and Valečková, 2014a; Pawlasová, Spáčil and Valečková, 2014b).

The aim of this contribution is identifying of the internal factors affecting Czech players as the EU members and Russian players as the non-EU members to buy virtual goods in free-to-play online games. The theory of factors affecting customer behaviour according to Kotler and Armstrong (2008) is applied. Kotler and Armstrong (2008) state consumer's motivation to buy products can be influenced by cultural, social, personal and psychological factors. This research focuses on the personal and psychological characteristics of consumer behaviour because these factors are more internal matters than cultural and social factors. The psychological factors in online consumer behaviour were applied also in Cetinã, Munthiu and Rãdulescu (2012). The area of free time activities was also explored in Rebrošová (2017) where the author focused on motivators of visitors to visit a theatre performance.

## 2. Problem Formulation and Methodology

The online questioning conducted in April 2017 was applied as **the research method**. We measured the respondents' opinions about the statements using only closed questions on a Likert scale of 1 to 5, where 1 corresponded to "I fully disagree" and 5 to "I fully agree" with the statement. The statements measuring personal and psychological factors took the base from Kotler and Armstrong (2008). The population were all online game players of League of Legends in the Czech Republic and Russia. The sample consisted of 292 respondents from the Czech Republic and 1234 respondents from Russia. The detailed structure of respondents is shown in Table 1.

**Table 1: Structure of Czech and Russian Sample of Respondents**

Gender		Age		Income	
<b>Czech sample of respondents (n=292)</b>					
<b>Man</b>	93.9 %	<b>0 – 17</b>	46.3 %	<b>Without any income</b>	25.8 %
<b>Female</b>	6.1 %	<b>18 – 34</b>	51.0 %	<b>With an income</b>	74.1 %
<b>Total</b>	100.0 %	<b>35 – 54</b>	1.1 %	<b>Total</b>	100.0 %
		<b>55+</b>	1.6 %		
		<b>Total</b>	100.0 %		
<b>Russian sample of respondents (n=1234)</b>					
<b>Man</b>	81.0 %	<b>0 – 17</b>	16.8 %	<b>Without any income</b>	40.9 %
<b>Female</b>	19.0 %	<b>18 – 34</b>	82.9 %	<b>With an income</b>	59.1 %
<b>Total</b>	100.0 %	<b>35 – 54</b>	0.2 %	<b>Total</b>	100.0 %
		<b>55+</b>	0.1 %		
		<b>Total</b>	100.0 %		

Source: author's calculations

A method of structural equation modelling (SEM) was applied to **analyse the data**. The purpose of this analysis was the evaluation of the designed model and the quantification of the factors in the designed model of motivation of Czech players as the EU members and Russian players as the non-EU members to buy virtual goods in free-to-play online games. As Ho

(2013) claims, a confirmatory way of testing of validity of the designed theoretical models using SEM is better interpretable and therefore we use this approach. The calculations were conducted in SPSS 20 and SPSS Amos 20 at the significance level of 0.05.

### Structural Equation Modelling

Nachtigall et al. (2003) declare that a general structural model consists of two parts – a *measurement model* and a *structural model*. The relations between the latent variables are measured in a measurement model and the relations between the observed and the latent variables are measured in a structural model. A structural model shows which latent variable is independent and which latent variable is dependent (Urbánek, 2000).

A *measurement model* is algebraically formulated as two systems of equations in matrix form (Urbánek, 2000; de Oña et al., 2013):

$$\vec{x} = \Lambda_x \vec{\xi} + \vec{\delta}, \quad (1)$$

$$\vec{y} = \Lambda_y \vec{\eta} + \vec{\varepsilon} \quad (2)$$

where  $\vec{x}$  is the vector of the indicator for the vector of latent variable  $\vec{\xi}$ ,  $\vec{y}$  is the vector of the indicator for the vector of latent variable  $\vec{\eta}$ ,  $\vec{\xi}$  is the vector for the latent exogenous variable,  $\vec{\eta}$  stands for the vector for the latent endogenous variable,  $\Lambda_x$  and  $\Lambda_y$  stand for the matrixes of the structural coefficients for the relations of variables' vectors  $\vec{x}$  and  $\vec{\xi}$  and variables  $\vec{y}$  and  $\vec{\eta}$  and  $\vec{\delta}$  and  $\vec{\varepsilon}$  stand for the vectors of residual variables for the vectors  $\vec{x}$  and  $\vec{y}$ .

The *model of latent variables* is algebraically formulated as (de Oña et al., 2013):

$$\vec{\eta} = B\vec{\eta} + \Gamma\vec{\xi} + \vec{\zeta} \quad (3)$$

where  $B$  and  $\Gamma$  represent the matrixes of the structural coefficients of the latent endogenous (exogenous) variables and  $\vec{\zeta}$  represents the measurement errors.

The *validity of the designed model* can be defined with multiple chi-squared tests. The CFI and NFI were calculated in this case. The rate of change of a conditional mean is shown as a regression coefficient (Hair et al., 2010). Hendl (2015) claims the relation between the variables is weak if the actual value of standardised regression coefficient is from 0.0 up to 0.3. The relation between the variables is moderate if the actual value of coefficient is from 0.3 up to 0.7, strong if it is from 0.7 up to 0.9 and very strong if it is from 0.9 up to 1.0.

The comparative fit index (CFI) is algebraically formulated as:

$$CFI = \frac{P_N}{P_{N_b}}, \quad (4)$$

where  $P_N$  and  $P_{N_b}$  represent the parameters of noncentrality for the estimated and the basic model. The estimated model represents the tested designed model and the basic model represents the null model in which the latent variables do not correlate. The CFI should be close to 1.000 (Urbánek, 2000).

The normed fit index (NFI) is algebraically formulated as:

$$NFI = 1 - \frac{F}{F_b}, \quad (5)$$

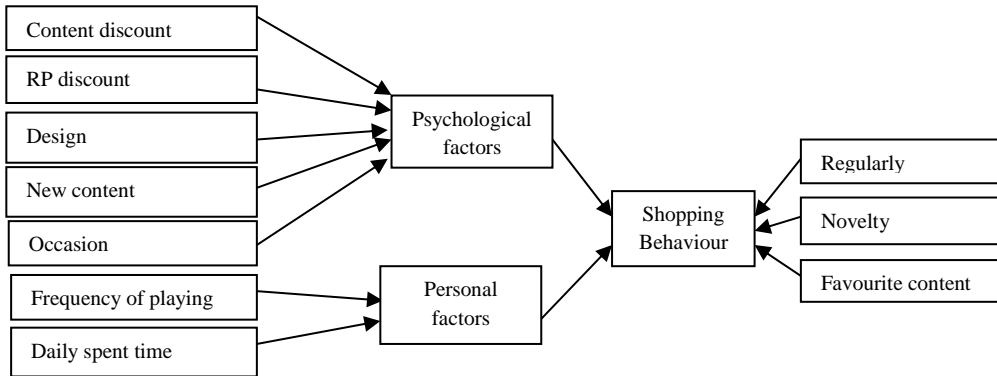
where  $F$  stands for the minimum value of the loss function for the estimated model and  $F_b$  stands for the value of the loss function as the minimum for the basic model (Urbánek, 2000). The NFI should be also close to 1.000 (Hooper et al., 2008).



### 3. Model Analysis and Results

The tested model based on Kotler and Armstrong (2008) combines personal and psychological factors to determine motivation of Czech players as the EU members and Russian players as the non-EU members to buy virtual goods in free-to-play online games. The research model is shown in Figure 1.

**Figure 1: Research Model**



Source: Author modification based on Kotler and Armstrong (2008)

The psychological factors show that customer motivation is influenced by motivation, perception, learning, and beliefs and attitudes (Kotler and Armstrong, 2008). In this research, the psychological factors were measured by the following observed variables:

Content discount	I am encouraged by content discounts to buy content of LoL.,
RP discount	I am encouraged by RP discounts to buy content of LoL.,
Design	I am encouraged by design of content to buy content of LoL.,
New content	I am encouraged by novelty of content to buy content of LoL.,
Occasion	I am motivated by a thematic event to buy the content of LoL.

The personal factors show consumer’s age and life cycle state, occupation, economic situation, lifestyle, personality and self-concept. The personality distinguishes one person from another by individual characters. These personal characters can be self-confidence, adaptability, sociability and dominance (Kotler and Armstrong, 2008). In this research, the personal factors were measured by the following observed variables:

Frequency of playing	I play League of Legends frequently.,
Daily spent time	I play League of Legends many hours per day.

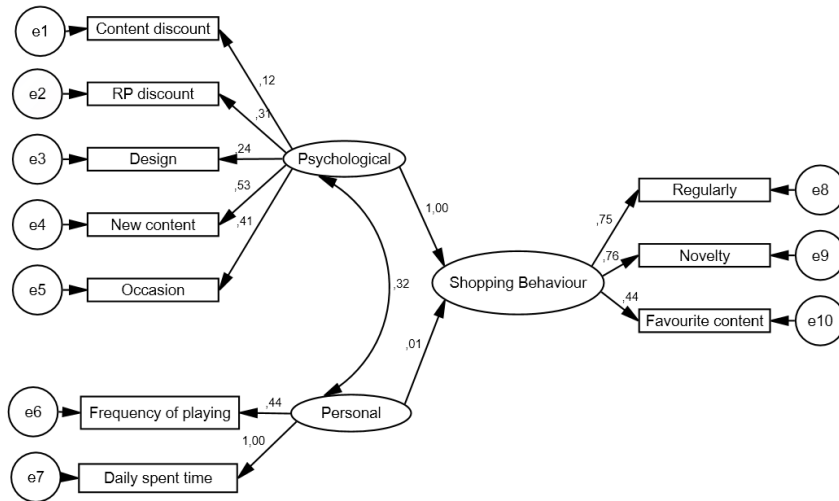
The shopping behaviour was measured by the following observed variables:

Regularly	I buy content of LoL regularly.,
Novelty	As soon as something new in content of the LoL, I buy it.,
Favourite content	I have a favourite champion (or more) and I like to buy something for him.

### 3.1 Validity of the Model for Czech Shopping Behaviour of Virtual Goods in Online Games

The validated model of Czech shopping behaviour of virtual goods in online games is shown in Figure 2.

**Figure 2: The Model of Czech Shopping Behaviour of Virtual Goods in Online Games**



Source: author’s calculations.

According to the analysis of **the measurement model**, all relations between latent and observed variables are statistically significant according to the actual significance levels except the relation between the observed variable *content discount* and the latent variable *Psychological*. Considering the actual values of standardised regression coefficients, there are the strengths of relations between observed variables and the latent variables that are strong and very strong. Specifically the strength of relation between observed variable *daily spent time* and the latent variable *Personal* is very strong and the strengths of relations between observed variables *regularly* and *novelty* and the latent variable *Shopping Behaviour* are strong. The relations between observed variables *occasion*, *RP discount* and *new content* and latent variable *Psychological* are moderate. Also the strength of relation between observed variable *favourite content* and the latent variable *Shopping Behaviour* is moderate.

However, there are also the strengths of relations between observed variables and the latent variables that are weak. Specifically these are the strengths of relations between observed variables *content discount* and *design* and the latent variable *Psychological* and also the strength of relation between observed variable *frequency of playing* and the latent variable *Personal*.

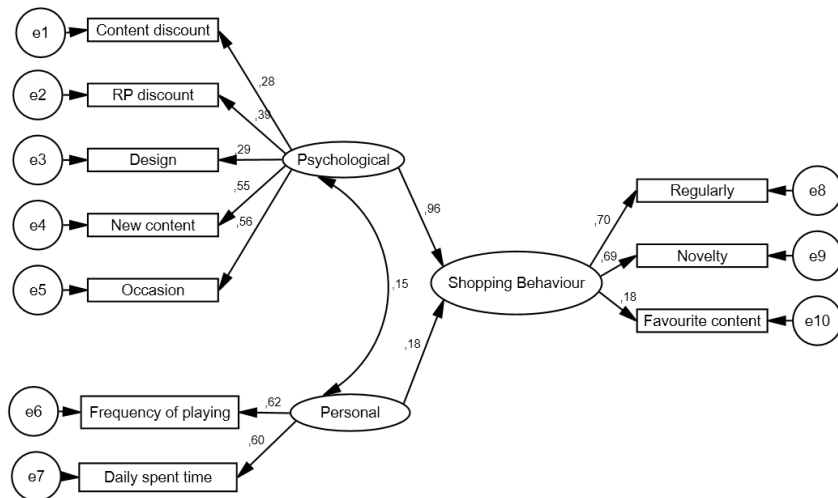
Considering the **model of the latent variables**, the relation between the latent variable *Psychological* and the latent *Shopping Behaviour* is statistically significant but the relation between latent variable *Personal* and latent *Shopping Behaviour* is not statistically significant. According to the actual values of standardised regression coefficients, the impact of the latent variable *Psychological* on the latent variable *Shopping Behaviour* is very strong whereas the impact of the latent variable *Personal* on the latent variable *Shopping Behaviour* is weak.

Considering **Goodness-of-Fit indexes** of the tested model, CFI of this tested model takes value of 0.734 that is a high value. NFI taking value of 0.696 claims that there are possibilities to improve the model and fit the real data more. According to NFI the designed model fits the real data in nearly 70 %.

### 3.2 Validity of the Model for Russian Shopping Behaviour of Virtual Goods in Online Games

The validated model of Russian shopping behaviour of virtual goods in online games is shown in Figure 3.

**Figure 3: The Model of Russian Shopping Behaviour of Virtual Goods in Online Games**



Source: author’s calculations.

According to the analysis of **the measurement model**, all relations between latent and observed variables are statistically significant according to the actual significance levels. Considering the actual values of standardised regression coefficients, the relations between observed variable and latent variable *Personal* are moderately strong. The strengths of relations between observed variables *RP discount*, *new content* and *occasion* and the latent variable *Psychological* are moderate. Also the strengths of relations between observed variables *regularly* and *novelty* and the latent variable *Shopping Behaviour* are moderate.

However, there are also the strengths of relations between observed variables and the latent variables that are weak. Specifically these are the strengths of relations between observed variables *content discount* and *design* and the latent variable *Psychological* and also the strength of relation between observed variable *favourite content* and the latent variable *Shopping Behaviour*.

Considering the **model of the latent variables**, all relations between latent exogenous variables and latent endogenous variable are statistically significant. According to the actual values of standardised regression coefficients, the relation between latent variables *Personal* and *Shopping Behaviour* is weak, whereas the relation between latent variables *Psychological* and *Shopping Behaviour* is very strong.

Considering **Goodness-of-Fit indexes** of the tested model, CFI of this designed model takes value of 0.811 that is a high value. Also NFI taking value of 0.797 claims that there are little possibilities to improve the model and fit the real data more. According to NFI the proposed model fits the real data in 79.7 %.

#### 4. Conclusion

Tassi [online] (2016) states though League of Legends is an online free-to-play game, players spend a lot of money for virtual goods, such as new characters, skins items or map improvements. This study discusses the players' motivation to buy virtual goods in online games. The aim of this contribution is identifying of the psychological and personal factors affecting Czech players as the EU members and Russian players as the non-EU members to buy virtual goods in free-to-play online games according to the theory of factors affecting customer behaviour according to Kotler and Armstrong (2008).

A structural equation modelling was applied and it was found that psychological motivators influence virtual goods shopping mechanism of Czech players as the EU members as well as Russian players as the non-EU members. Although these countries are currently developing differently thanks to membership and non-membership in the EU, this similarity of the results can be described in the 6-D Model according to The Hofstede Centre [online] (2017). This model states that Czechs and Russians are generally not indulgent, it means they have a tendency to cynicism and pessimism, Czech and Russian culture is shown to be pragmatic and Czechs and Russians has a high preference for avoiding uncertainty. On the other hands, the Czech Republic is an individualist society whereas Russia is a collectivist society. Whereas Czech society is a Masculine hierarchical society, Russian society is Feminine very much hierarchical society.

The potential limitations of this conducted research lie in the applying of only personal and psychological factors affecting players' motivation to buy virtual goods in online games. Therefore, it is recommended to apply also cultural and social factors according to Kotler and Armstrong (2008) or identify other factors according to different theories and authors for applying in the future research.

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#### References

- [1] Cetinã, I., Munthiu, M.-C. and Rãdulescu, V. (2012). Psychological and Social Factors that Influence Online Consumer Behavior. *Procedia - Social and Behavioral Sciences*, vol. 62, pp. 184-188.
- [2] de Oña, J., et al. (2013). Perceived service quality in bus transit service: A structural equation approach. *Transport Policy*, vol. 29, pp. 219 - 226.
- [3] Hair, J. et al. (2010). *Multivariate Data Analysis*. New Jersey: Prentice Hall.
- [4] Hendl, J. (2015). *Přehled statistických metod: analýza a metaanalýza dat*. Prague: Portál.

- [5] Ho, R. (2013). *Handbook of Univariate and Multivariate Data Analysis with IBM SPSS*. Boca Raton: CRC Press.
- [6] Hofstede Centre (2017). Country comparison [online]. [cit. 2018-03-05]. Available: <https://www.hofstede-insights.com/country-comparison/czech-republic,russia/>
- [7] Hooper, D. et al. (2008). Structural Equation Modelling: Guidelines for Determining Model Fit. *Electronic Journal of Business Research Methods*, vol. 6, iss. 1, pp. 53-59.
- [8] Kotler, P. and Armstrong, G. (2008). *Principles of Marketing*. New Jersey: Pearson Education.
- [9] Llorens, M. R. (2017). eSport Gaming: The Rise of a New Sports Practice. *Sport, Ethics and Philosophy*, vol. 11, iss. 4, pp. 464-476.
- [10] Nachtigall, C. et al. (2003). (Why) Should We Use SEM? Pros and Cons of Structural Equation Modelling. *Methods of Psychological Research Online*, vol. 8, iss. 2, pp. 1-22.
- [11] Pawlasová, P. (2016). Factors affecting online group-buying intention in the selected countries of the EU: An extended perspective on the theory of planned behaviour. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 738-745.
- [12] Pawlasová, P., Spáčil, V. and Valečková J. (2014a). Perception of EU Economic Situation by Generation Y. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 533-544.
- [13] Pawlasová, P., Spáčil, V. and Valečková J. (2014b). Image of the European Union Perceived by Generation Y. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 524-533.
- [14] Rebrošová, K. (2017). Typology of consumers from Generation Y according to approach to the theatre. In *Mathematical Methods in Economics*. Hradec Králové: University of Hradec Králové, pp. 620 – 625.
- [15] Seo, Y. (2013). Electronic sports: A new marketing landscape of the experience economy. *Journal of Marketing Management*, vol. 29, iss. 13-14, pp. 1542-1560.
- [16] Tassi, P. (2016). Riot Games Reveals 'League of Legends' Has 100 Million Monthly Players [online]. [cit. 2018-03-05]. Available: <https://www.forbes.com/sites/insertcoin/2016/09/13/riot-games-reveals-league-of-legends-has-100-million-monthly-players/#2a129b825aa8>
- [17] Urbánek, T. (2000). *Strukturální modelování v psychologii*. Brno: Psychologický ústav AV ČR a Nakladatelství Pavel Křepela.
- [18] Velčovská, Š. and Hadro D. (2018). Generation Y Perceptions and Expectations of Food Quality Labels in the Czech Republic and Poland. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, vol. 66, iss. 1, pp. 325-334.
- [19] Velčovská, Š. and Klapilová Krbová P. (2016). Consumers' Attitudes towards Food Quality Labels in Selected European Union Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 1068-1077.

## **Informed and Free Consent as a Tool to Process Personal Data by General Data Protection Regulation in the European Union**

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### **Abstract**

*Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (GDPR) comes into force since 25<sup>th</sup> May 2018. This regulation exchanges the present Act No. 101/2000 Coll. on personal data protection and implements totally new rules for this issue in the EU member states. Many subjects do not realize that the regulation is valid in all member states beginning with an effective date and that it is not the subject of implementation into national legislation. Also this fact is said to be the reason why the GDPR regulation is being discussed but only few subjects makes the needed steps. The aim of this article is to mention and analyze possibilities when the subject can process personal data as well as to show that the only consent is not always the easiest or the most suitable way to process personal data. On the contrary, it is the latest option if the subject does not find any other legal basis to process the data. Subjects' agreement being not properly used is misleading and groundless since the beginning because it can rather make things worse for the controller or processor contrary to assumptions.*

**Keywords:** Consent, Controller, GDPR, Lawfulness of Processing, Processor, Regulation EU

**JEL Classification:** K10, K23, K38

### **1. Introduction**

Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (hereinafter the “GDPR”) is being valid and comes into force on 25th May 2018. This regulation has been proved by the European Parliament on 14th April 2016 after four-year negotiation and repeals Directive 95/46/EC (General Data Protection Regulation). As for the Czech Republic, it replaces current Act No. 101/2000 Coll. on personal data protection in its big part.

Regulations issued by the European Parliament are effective within the whole EU beginning with the date determined by the European Parliament and it is not necessary to implement them to national laws as it is with directives. Therefore, it is important to refer strictly to GDPR as it is the regulation not the directive. GDPR requires much more demands as it comes to personal data protection, control of the entire process as well as responsibility. Starting with the date when the regulation comes into force, everything has to be harmonized.

Topic of personal data protection by the new GDPR is being discussed in all countries of the European Union. Thus, there are many publications issued dealing with this topic. This article

mentions only small part of them. As it comes to the Czech authors, this issue is being elaborating by e.g. Nulíček et al. (2017) or Nezmar (2017).

The analysis of the authors Tikkinen-Piri, Rohunen, Markkula (2018) is interesting. Those compare the current Data Protection Directive 95/46/EC with the GDPR systematically analyzing their differences. Providing such analysis, they identified and classified the key consequences of the changes and created 12 aspects of these analysis implications and the corresponding guidance on how to prepare for the new requirements. Summarizing view of given topic is mentioned by e.g. Goddard (2017) and specific rights of children in connection with personal data protection are dealt by Lievens and Verdoodt (2017). Additional information as for information safety is described by Hedley and Jacobs (2017) saying that the GDPR is not alone, of course – in the information security space it is accompanied by the Network and Information Security Directive (NISD).

The basic term mingled the entire text of Regulation, the term “personal data” is. This term is protected by the Regulation. Personal data can be primarily defined as all information about identified or identifiable natural person when identifiable person is such person, which can be directly or indirectly identified by the particular identifiers. (Regulation GDPR, art. 4 par. 1)

Besides this fundamental definition, the Regulation determines different categories of personal data, whose legal protection differs. The following categories can be mentioned:

- general personal data – e.g. name, gender, age, birth date, marital status, IP address, photographic data, e-mail address, phone number, identification number in the public register etc.,
- special category of personal data – data about race or ethnical origin, political opinions, religion, philosophy, union membership, health condition, sexual orientation; further, this category involves genetic data, biometric data in case those are processed in order to identify natural person uniquely.

As far as information about crimes and criminal proceedings are concern, approach to that information has been changed. Such information is not being considered delicate but became the separate category and is determined to be processed with a special regime said in art. 10 of GDPR.

It is necessary to point out that protection provided by the Regulation relates to only natural person (not considering whether it is person making business or not). Protection does not touch legal entities although those can also face damage or abuse of their name as well as information can be used without this entities' consent. Legal entities though have to use other options of protection, which the law provides with. Above mentioned natural persons are further marked as the data subjects.

Controller's obligation is to administrate reports on processing, appoint a representative for personal data protection or give the right to data be transferred from one controller to another. The new step is a reporting of infringement of personal data safety to the Office for Personal Data protection.

Each processor will provide the basic analysis in order to achieve a compliance with GDPR. This analysis will consists of several processes: determination of range, comparing analysis, risks analysis, regulations plan, regulations implementation and controlling audit. The aim of this article is to focus on the first point, which is a determination of legislative range and the analysis of conditions, under which the subject is allowed to process personal data. Other aim is to assess whether the consent is the easiest or the most suitable way to process personal data.

## 2. Rules of Personal Data Processing

There are the rules of personal data processing defined in the Regulation art. 5. The entire regulation follows those rules and other regulation has to be in compliance with it. The basic rules are as follows:

- lawfulness, fairness and transparency,
- purpose limitation,
- data minimization,
- accuracy,
- storage limitation,
- integrity and confidentiality,
- accountability (responsibility of the controller for the above mentioned rules observance and their harmonization is meant).

Lawfulness is the most important principle of personal data protection so the authors pay the biggest attention to it. The processing has to be always based on one of legal basis determined in the article 6 of the Regulation. Data can be processed based on the only one reason or they can be combined. Controller can process the data for different purposes but each purpose has to have its legal basis. Such case can occur that the controller would process the personal data for different purposes and each purpose would have different legal basis. Such situation can come when one purpose passes (one legal basis) but the data will be processed for another purpose. Data can change within the time but new can occur as well as pass. The obligation to liquidate personal data comes in the moment the last reason to process personal data ends. Determination of lawfulness is thus the first and significant step because in case the controller does not have at least one legal title to process data then he acts against the law.

### 2.1 Lawfulness of Processing

Lawfulness to process personal data is determined in the article 6 of GDPR and as such means that the controller is allowed to process the data. *“Processing shall be lawful only if and to the extent that at least one of the following applies: (a) the data subject has given consent to the processing of his or her personal data for one or more specific purposes; (b) processing is necessary for the performance of a contract to which the data subject is party or in order to take steps at the request of the data subject prior to entering into a contract; (c) processing is necessary for compliance with a legal obligation to which the controller is subject; (d) processing is necessary in order to protect the vital interests of the data subject or of another natural person; (e) processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller; (f) processing is necessary for the purposes of the legitimate interests pursued by the controller or by a third party, except where such interests are overridden by the interests or fundamental rights and freedoms of the data subject which require protection of personal data, in particular where the data subject is a child. Point (f) of the first subparagraph shall not apply to processing carried out by public authorities in the performance of their tasks.”* (Regulation GDPR, Article 6).

#### ***Consent to the processing of his or her personal data for one or more specific purposes***

Consent thus is one of legal reasons, based on which the controller can process the personal data. *“Consent of the data subject means any freely given, specific, informed and unambiguous indication of the data subject's wishes by which he or she, by a statement or by a clear affirmative action, signifies agreement to the processing of personal data relating to him or her”* (Regulation GDPR, art. 4, par. 11).



Consent is a legal act, by which the subject allows the controller to process personal data. This consent is subordinated not only to the conditions determined by GDPR but to general conditions of legal acting said in Civil Code (if controller is related to the Czech law). General regulation of contractual and legal representation according to the Civil Code will be applied to the consent granting. (Nulíček et al. 2017). Personal data protection is closely connected with a personality protection as well being regulated by the Civil Code.

GDPR determines clear conditions to express consent to personal data processing. Consent has to be always granted for particular purpose and this purpose has to be clearly said to the subject. *"Consent has to be newly mainly unequivocal, separated from other agreements, has to be actively granted (not by not acting or pre-filled in consent box) and has to be revocable in such easy way as it was granted."* (practical comment GDPR, ASPI, art. 6)

Consent thus has to be distinguishable, distinguished from other facts, to which the subject expresses its opinion. Consent cannot become the part of a contract or trade conditions as it could be so far. At the same time, provision of service or contract conclusion cannot be conditioned by the consent. The subject should not be forced to give the consent. Even the way can be not clear. For example, the employer asks his/her employees for the consent with camera system at work. Employees could be afraid to deny the consent because of employment lose. Data subject has to be allowed to deny the consent as well as to withdraw it any time. To be able to withdraw the consent, the entire process has to be known when granting the consent.

Nevertheless, by Dolejšová (2018), e.g. it will be possible to offer the customers (data subject) some discount or participation in loyalty programme against the e-mail address for sending the newsletter (and thus to obtain the consent with data processing).

Concrete and specific consent means also a pointing the controller, who will be collecting data (or to whom the consent is granted) but it also means possible third parties, which will process the data or whether the data are allowed to be transferred to another subjects.

Current consents remain valid if they match the conditions given in art. 7 of GDPR. It can become the problem for many controllers. Very often, the consents do not match the condition of being distinguishable although they meet any other conditions. At the same time, it would be suitable to verify harmonization with GDPR.

***Processing is necessary for the performance of a contract to which the data subject is party or in order to take steps at the request of the data subject prior to entering into a contract***

As lawfulness itself says, it is situation when the contract with data subject is concluded and personal data controller is bind by some obligations or authorization. It can be such situation when controller concludes a purchase contract with data subject, based on which the controller is obligated to send the purchase subject to the address given by this subject. Thus it is possible to process data given by the subject in order to fulfill this contract (purchase subject sending) without requesting the consent of data subject. In case personal data processing would go beyond the frame of contract, it is necessary to obtain different lawfulness to process data (e.g. consent).

***Processing is necessary for compliance with a legal obligation to which the controller is subject***

Such situation can come when the controller is obligated to process personal data of the subject and this obligation results directly from the law. In such cases, it is also special lawfulness and it is not necessary to have different lawfulness. However, it has to be in compliance with the law, which determines the obligation to process personal data. The controller has to control the scope of requested data in order not to collect more data than a necessary minimum is.

For example, collecting data about employees to fulfill the obligations towards other subjects (health insurance, social welfare, Labour Office etc.) or banks, which have to process data of their clients and thus fulfill the legal obligation resulting from legislation against money laundering (Nulíček, 2017).

***Processing is necessary in order to protect the vital interests of the data subject or of another natural person***

Subject health' protection is considered the important vital interest. This point leads to situation when the institutions of public health protection (hospitals, clinics, doctor's offices) could process the subject's personal data in case of emergency without his/her express consent (mainly because the subject is not able to grant the consent). Thank to such processing, e.g. anamnesis can be checked out in order to decide on further medical treatment etc.

***Processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller***

This category enables public administration performance towards the subjects in order not to be limited in this performance mainly when personal data processing is considered. In case public administration authorities or other subjects authorized to do so need personal data of the subjects to fulfill their tasks, those are entitled to process the data based on this lawfulness and do not need the consent of the subjects. In case tasks of public administration authority would be delegated to private legal subjects, it will be very difficult to determine whether personal data processing is still the subject of public administration and whether it is different activity of this subject. Determination of public administration becomes an independent category. As Kozieł (2016) shows in the example of public funds, the term public institution is very wide and differently explained for different purposes. Even such situation can occur that internal (domestic) legislation contains different definition compared to European legislation.

***Processing is necessary for the purposes of the legitimate interests pursued by the controller or by a third party, except where such interests are overridden by the interests or fundamental rights and freedoms of the data subject which require protection of personal data, in particular where the data subject is a child***

The question of legitimate interest when processing personal data is such complex that it could be elaborated in separate article. Nevertheless, it can be said shortly that this is sensitive topic. Each case would be the subject of investigation to what extent it is legitimate interest of the controller in relation with personal data protection of the subjects. One of many examples can be mentioned – implementation of the camera system at the controller in order to protect a property of this controller while at the same time personal data of individuals being seen on the camera would be infringed. In such case, it will be necessary to assess whether the controller was authorized to process personal data (to record) of the subjects without their consent even he/she protected his/her property. If conclusion says yes, then the controller processes those data in compliance with legal regulations and disposes of lawfulness by art. 6 let. f) of Regulation.

**Responsibility of Personal Data Controller**

At the same time, GDPR strengthens the principle of responsibility towards the third parties. The controller is the main person responsible for personal data legal processing. It means not only what data will be collected, how and for what purpose based on what lawfulness, how long but it also means thorough data safety in order to guarantee the rights of data subjects. The controller should clearly determine people, who will be responsible for those issues.

Nevertheless, the main person responsible for implementation and management of effective system, collecting and processing of personal data the owners/statutory body/management of organizations will be. (Krügerová, Kozieł, 2017). In addition, in case the controller and processor fulfills at least one condition being determined in art. 7 of GDPR they are obligated to appoint the representative dealing with personal data protection. Stricter demands for personal data protection will not protect us against cyber-crimes but contrary to that, it brings new responsibility and new risks for some segments as well as new opportunities for e.g. insurance market dealing with cyber risks (more detailed Krügerová, 2016). Storing and registering of given consents is connected with it as well.

### 3. Selection of Lawfulness

There are 6 options, based on which personal data can be processed. One of them also the consent is being most likely used the most frequently and, at the same time, bringing the most problems. Data subject should choose such lawfulness, which would reflect the processing purpose as well as relation of data subject and controller. It is always necessary to assess and evaluate all aspects as it comes to data processing. If there cannot be found any other legal basis to process data, then the consent is suitable to be used. Such cases will occur very often when the controller will process some data due to the contract fulfillment or service, i.e. without the consent but based on legal basis. It cannot be excluded in extreme cases though that in practice the controllers will demand the express consent although there will exist other lawfulness to process personal data.

When choosing the consent as the lawfulness, its impact on the rights and freedoms of natural persons becomes an important aspect. Data subjects will gain definitely more rights when data will be processed based on the consent. Also related to data erasure (GDPR uses the term “right to be forgotten”). By Nezmar (2017), it is not appropriate to ask for the consent in case it cannot be offered real selection as for how the data will be used.

Let's apply it on e.g. bank as the controller of personal data. Bank concludes the contract with the client about bank account management; in such case, the bank will be process the data based on this contractual obligation (by art. 6 of GDPR). Further, the bank will process information about its clients to fulfill legal obligation as well as to fulfill legal obligation resulting from legislation dealing with money laundering (by art. 6c of GDPR). Only for the marketing purposes (sending the offers, satisfaction evaluation etc.) the bank uses the consent (by art. 6a of GDPR). If the bank would ask the data subjects for the consent to issue all above mentioned case, this consent would be for the client misleading since the beginning. Data subject would not be able to control its data. If the client would demand the erasure of his/her data, the bank would have to manage the account and thus to process the data and fulfill its legal obligations, too.

The second example the school is. The school processes personal data of teachers, students, students' parents or further legal representatives (e.g. grandparents). Data are processed in the frame of school registers (by art. 6c) or in the frame of Register of associate professors, professors and extraordinary professors (kept by the Ministry). After a child finishes the school, those people have the right to demand the personal data to be erased. Further, the school will follow the art. 6b of GDPR – necessary processing of data resulting from concluded contracts. The school is also related to the processing aiming the school rights protection or its legitimate rights (e.g. as creditor, administration, court, criminal processes recording the bullying at school) (by art. 6d, 6f). The school will also process data when fulfilling the tasks on behalf of public interest or when executing public power, e.g. when processing personal data of applicants during admissions (by art. 6e). The school also needs the consent when it

wants to public the pictures made during the school events or when processing data about the person picking up the child from school or reporting graduates (including their contact data). During all above mentioned acts, personal data are processing. In case the school would not be sure whether it has lawfulness it likely does not have it; thus it should obtain informed consent. As far as the schools is concern, further conditions should be paid attention to as well such as consent being given by the child (more detailed Lievens and Verdoodt, 2017) and processing of specific data categories.

Considering above mentioned examples, the difference can be seen in particular lawfulness and the consent usage for concrete clearly defined purpose, for which any other legal basis cannot be found.

#### **4. Conclusion**

Regulation GDPR brought fundamental news into the treatment of personal data. Nevertheless, if at present time the subject processes the data in accordance with the law on personal data protection, it will not be necessary to step in implemented processes but only new conditions can be taken into consideration. To understand it properly, it has to be understood what the personal data are – e.g. name, surname, any other data enabling to identify concrete person (thus phone number, e-mail address, residential address etc.). As for news in GDPR, obligation of controller to register processing, to appoint the representative for personal data protection or possible right enabling to transfer personal data to another controller. Reporting the cases of personal data safety infringement to the Office for personal data protection is the new step.

The aim of this article was to introduce and analyze options when and under what conditions the subject could process personal data. There exist six options, based on which personal data can be processed and one of them the consent is. The data subject should choose such lawfulness, which reflects the purpose and relation between data subject and controller the most. If obtaining and formulation of the consent were difficult, then the consent would be the most suitable way to process personal data. Contrary to that, it would be the last option if the subject does not find any other legal basis to process data. Not properly used subject's consent is misleading since the beginning and not legitimate in case it can bring the controller or personal data processor to worse situation. Possible generalized consent being obtained by the controller in order to process data for different purposes would be in breach of several provisions of general regulation.

The consent has to be concrete, specific and informed, i.e. the subject has to know for what purpose and in what extent the consent is being given. Everything has to be explained in the understandable way. Not accurate or not understandable consent can be considered invalid. Once the consent was given, it is necessary to up to date it and control whether the purpose or conditions have been not changed within time.

New regulation GDPR brings many changes in approach to personal data protection. Nevertheless, also these changes have to be approached with common sense and detached view. Most of hysteria and panic being seen in media and among non-professional public results from ignorance of new legal regulation. For many acts, within which personal data are processing, there can be 5 other legal bases applied except consent being offered by this new regulation.

It is clear that effect of new regulation will necessarily bring the need to implement changes and new measures at meant subjects. Such situation comes with each new legal regulation. Regulation GDPR is extraordinary by the fact that the range of subjects, which will be influenced by it, is very wide. Above that, if there is a detailed discussion provided in the

Czech Republic, it is more than certain that similar discussions and concerns will be seen in other EU member states because the regulation will valid within the entire EU. Further problems can occur as EU regulations will be translated in not quality way as it was in the past. One version of regulation in the Czech language mutation can differ from the English version although both are obligatory. As time will go on, the practice will show how an implementation of new personal data protection will be dealt with.

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### **References**

- [1] Dolejšová, P. (2018). Ani GDPR nás reklam v e-mailu nezbová. [Title in translation: Neither GDPR will advertisements us in emails.] *Právní rádce*, vol. 2018, iss. 2, pp. 50–52.
- [2] Goddard, M. (2017) The EU General Data Protection Regulation (GDPR): European regulation that has a global impact, *International Journal of Market Research*, vol. 59, iss. 6, p. 703-706.
- [3] Hedley, D., Jacobs, M.(2017). Feature: The shape of things to come: the Equifax breach, the GDPR and open-source security. *Computer Fraud & Security*, vol. 2017, iss. 11, pp .5-7.
- [4] Kozieł, M. (2016). Breach of Budgetary Discipline as a Direct Consequence of the Breach of Conditions in the Management of the EU Funds. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, pp. 489-496.
- [5] Krügerová, M. (2016). Cyber Risk and Importance of Cyber Insurance for Competitiveness Business Entity. In *Ekonomika a řízení podniku ve 21.století*. Ostrava: VŠB-TU Ostrava, Faculty of Economics.
- [6] Krügerová, M. a M. Kozieł. (2017) Analysis of company statutory bodies members' liability and advantages of directors and officers liability insurance. In *SGEM 2017*. Bulgaria: STEF92. pp. 333 - 340.
- [7] Lievens, E., Verdoodt, V. (2017). Looking for needles in a haystack: Key issues affecting children's rights in the General Data Protection Regulation. *Computer Law & Security Review: The International Journal of Technology Law and Practice*. Vol. January 1.
- [8] Nezmar, L. (2017). GDPR praktický průvodce implementací. [Title in translation: GDPR Practical Implementation Guide]. Praha: Grada.
- [9] Nulíček, M. et al. (2017). GDPR. *Obecné nařízení o ochraně osobních údajů. Praktický komentář*. [Title in translation: GDPR. General Regulation on the Protection of Personal Data. Practical commentary.]. Praha: Wolter Kluwer ČR.
- [10] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).
- [11] Tikkinen-Piri, Ch., Rohunen, A., Markkula, J. (2018). EU General Data Protection Regulation: Changes and implications for personal data collecting companies. *Computer Law & Security Review: The International Journal of Technology Law and Practice*, vol. 34, iss. 1, pp. 134-153.

## **Analysis of Dependence of Selected Indicators in Debtors in Insolvency Proceedings in the Relation to Value Added Tax in Conditions of European Union**

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### **Abstract**

*European Union Value Added Tax Directive allows the Member States to include into their national legislation the possibility for the creditors to correct the amount of output tax in case that their debtors are in insolvency. The supplier is generally required to include the carried out transaction into revenues and has the obligation to account for relevant output tax in the moment of the chargeable event, regardless of whether the transaction was paid. The special provision of law was introduced into legislation as anti-crisis measure within the European Union. The aim of the paper is to evaluate by using the correlation analysis the interdependencies between selected indicators related to insolvency and the amount of value added tax correction in case of debtors in insolvency proceedings. The results of the analysis showed the most significant dependence between the percentage of receivables for which the correction of the output tax was made from the total value of receivables and the percentage of required tax correction which was actually returned by the debtor to the state budget.*

**Keywords:** *accounting, correlation analysis, European Union legislative harmonization, insolvency, value added tax*

**JEL Classification:** *C50, G33, H20, M40*

### **1. Introduction**

The Czech Republic as one of the European Union Member States is obliged to implement the relevant European Directives into national legislation. First of all, focusing on accounting, the national legislation of individual Member States, mainly due to globalization, tends to move closer to International Financial Reporting Standards (IFRS) (Sulik-Gorecka, Strojek-Filus and Maruszewska, 2017) or (Hakalová, Pšenková and Losová, 2014). This initiative of the Member States also relates to the harmonization of accounting legislation within the European Union. One of the European Directives which has recently significantly influenced the accounting legislation of the Member States is Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC. The aim of this Directive is to reduce administrative burden, in particular for small and medium-sized enterprises. For more about small and medium sized companies economy in the European Union see e.g. De Moor, Wiczorek-Kosmala and Blach

(2016) or Tošenovský (2014). Mikušová (2017) also points out, among other things, the administrative burden that reduces the agility of small and medium-sized enterprises.

However, one of the basic accounting rules is still valid, namely that an accounting entity has to include a supply of goods or services into revenues, regardless of whether those supplies were paid by the recipient (Kuznetsova and Kuznetsov, 2017). Between these two time points, the issue of the invoice and its payment, there may actually arise considerable time lag, or the claim may be reimbursed only partially or not to be paid at all. Receivables are currently still quite risky component of assets of an enterprise that has a negative impact on the ability of the company to pay (Bieliková and Paliderová, 2016). The provider of the transaction thus gets into position of the creditor and the recipient into the position of the debtor (Kašík, 2015). Apart from the obligation to include this receivable in the revenues regardless of its payment, there arises another duty for a provider of the transaction, namely the liability to account for relevant value added tax on output at the appropriate rate. Development of value added tax rates within the European Union is analysed e.g. by Šíroky and Maková (2014).

In order not to distort the conditions of the internal market, the harmonization of value added tax within the European Union is on a high level (Schenk, Thuronyi and Cui, 2015). By contrast, the field of direct taxation, which also has a connection with a growing number of European companies, is subject to tax competition (Hakalová, Palochová and Pšenková, 2016). The influence of direct taxes burden and consumer taxes burden on foreign investments includes the study written by Moravec and Kukulová (2014). The rules for application of value added tax within the European Union are governed by the Council Directive 2006/112/EC of 28 November 2006 on the common system of the value added tax (hereinafter referred to as the VAT Directive).

In accordance with Section 90 of this Directive the Member States are allowed to implement the provision to their legislation that enables the creditor to make the correction of output tax in case of transactions remaining totally or partially unpaid. The specific conditions for the implementation of this correction varies from one Member State to another, as the Directive does not specify them exactly. This provision has been implemented into the national legislation of at least thirteen states, namely Belgium, Czech Republic, Denmark, France, Italy, Ireland, Latvia, Luxembourg, Germany, Portugal, Austria, Greece and the United Kingdom (Chamber of Deputies. Parliament of the Czech Republic, 2018).

On the other hand, this provision imposes an obligation for the debtor, or in the conditions of the Czech Republic for the insolvency practitioner, to reduce the right to deduct input tax exercised from this transaction and then pay the tax. Moreover, if the insolvency practitioner of the debtor intentionally did not grant the tax concerned, such behavior would have already shown the features of tax evasion. For more about tax evasion see e.g. Pickhardt and Prinz (2012) or Hashimzade and Epifantseva (2018).

The insolvency law is harmonized within the European Union as well, for more information see McCormack, Keay and Brown (2017). The aspects of insolvency law reform in Italy are included in research carried out by Accettella (2016) and another Italian point of view that is close to the problematics of insolvency bring Florio and Leoni (2017). Nevertheless, the Judgment of the Court of Justice of the European Union in Case C-246/16 Enzo Di Maura v. Agenzia delle Entrate – Direzione Provinciale di Siracusa of 23 November 2017 underlined on the Italian example the need to amend the VAT Directive and establish clear rules for application of valued added tax correction in case of bad debts (CURIA, 2017).

The implementation of this provision into the legislation of the Czech Republic with effect from April 1, 2011 has been accompanied by many interpretative problems from the very

beginning. One of the most pressing issues is whether this provision can be applied to claims that arose prior to the implementation date, or the question of the timing of the claim that arose six months prior to the court's decision about the debtor's bankruptcy. For more about this problematics see Krzikallová, Krajňák and Bařinová (2017).

## 2. Problem Formulation and Methodology

As it have been already mentioned in the introduction, the implementation of the provision allowing correction of the amount of output tax in case of receivables from debtors in insolvency proceedings has brought a number of problems in the Czech Republic and the question is how the relevant legislation can be amended or cancelled, not only in the Czech Republic but also within the European Union. According to the research (Sobotovičová, 2015) carried out among creditors in the Czech Republic, this provision has not been used too much. Another controversy is brought by the thought whether the actual payment of the tax correction to the state budget by the debtor in the insolvency proceedings would occur due to the presumed lack of the debtor's property.

For this reason, the authors decided to carry out a questionnaire research among the insolvency practitioners of the Moravian-Silesian Region to bring the answer to the question of the use of this provision by analysing selected contexts in the conditions of the debtors in the Czech Republic in close connection with the law of the European Union.

### 2.1 Data

The input data for the analysis were obtained from a questionnaire research made among the insolvency practitioners and entities in insolvency proceedings in the Moravian-Silesian Region at the beginning of 2017. According to the insolvency register, there were 513 such administrators in the Czech Republic, including 71 in the Moravian-Silesian Region. The number of entities in insolvency in the Moravian-Silesian Region reached the sum of 199 in 2016. The number of entities in insolvency represents the size of the population in the questionnaire research.

Using the equation (1) the number of respondents is determined so that the data obtained from the questionnaire research are statistically relevant and allow the following analysis,

$$n = \frac{z^2 \times N \times r \times (1-r)}{(d^2 \times N) + (z^2 \times r \times (1-r))} \quad (1)$$

where  $N$  is the size of population,  $z$  the required degree of certainty,  $d$  permissible deviation rate and  $r$  expected deviation rate. For a degree of certainty 0,05 the degree of  $z$  becomes the value of 1,96. The required accuracy defined by (2) must not acquire the value of 0. The expected deviation of population  $r = 0.02$  (according to the International Standard on Auditing 530 Audit Sampling) (Chamber of Auditors of the Czech Republic, 2018). The above mentioned values are determined in accordance with the rules for defining the sample size in auditing tests in accounting. The degree of certainty 0,05 represents a standard level according to Newbold (2013).

$$p = d - r \quad (2)$$

Relationship (2) expresses the required accuracy, which as is clear from the formalization, must not be equal to 0.

By adding into equation (1) the sample size is determined,



$$n = \frac{1,96^2 \times 199 \times 0,02 \times (1-0,02)}{(0,02^2 \times 199) + (1,96^2 \times 0,02 \times 0,98)} = 96,73 = 97$$

The conclusion shows that there is a necessity to address in the questionnaire research a total of 97 respondents - entities in insolvency proceedings.

## 2.2 Methodology

To achieve the objectives of the paper the authors use in this paper the standard positivist economic methodology including analysis, synthesis, deduction, comparison and study of relevant legislative sources. In the field of quantitative methods, they use the methods of correlation analysis. The quantitative methods are used in their research by e.g. Doš and Foltyn-Zarychta (2017), Sucháček, Sed'a, Friedrich and Koutský (2017) or Tošenovský (2016).

The Pearson correlation coefficient  $r$  characterising the strength of dependency between the two characters ( $x$  and  $y$ ) has the form of (3),

$$r = \frac{\sum_{i=1}^n (x_i - \bar{x}) \times (y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \times \sum_{i=1}^n (y_i - \bar{y})^2}}, \quad (3)$$

where  $\bar{x}$  and  $\bar{y}$  are sample average (Morris, 2012). If the value  $r$  is close to 0 the considered values are independent from each other. The more the value is closer to 1 the higher is the level of dependence. More about the correlation analysis eg. Jacques (2013) and Barrow (1988).

## 3. Problem Solution

In the questionnaire research, the data were obtained for the purpose of analysis of their interdependencies. The results are shown in Table 1 and Table 2.

The monitored variables included: the amount of corrected VAT (A), the percentage of receivables for which the tax correction was made from the total amount of receivables (B), what percentage of the required tax correction was returned to the state budget (C), actual % of claims incurred during the 6 months prior to the bankruptcy court's decision (D), the actual % of claims that arose in a period earlier than 6 months prior to the bankruptcy court's decision (E) and the average costs of processing the agenda of the amount of the tax correction for one claim (F).

In the first part of the study, the interdependence was verified by the Pearson correlation coefficient  $r$  (3). The results of interdependencies are shown in Table 1.

The results in this table show that the highest dependence is between the proportion of receivables in which there was made the VAT correction and the percentage of required tax correction that was returned to the state budget. This is the only case where there is a strong dependence between the analysed two factors. In all other cases, the values are less than 0.5. Moderately high degree of direct dependence is between the average costs associated with processing of VAT correction for one claim and the amount of tax returned to the state budget. Besides positive dependencies that are significant in the above mentioned cases, there were also found negative dependencies. However, the value of the  $r$  coefficient is not significant.

**Table 1: The Correlation Matrix - r**

Factor		A	B	C	D	E	F
<b>A</b>	R	<b>1</b>	<b>0,176</b>	<b>-0,138</b>	<b>-0,164</b>	<b>0,134</b>	<b>0,191</b>
	Sig.		0,202	0,354	0,348	0,458	0,209
<b>B</b>	R	<b>0,176</b>	<b>1</b>	<b>0,718**</b>	<b>-0,098</b>	<b>0,064</b>	<b>0,126</b>
	Sig.	0,202		0,000	0,580	0,726	0,415
<b>C</b>	R	<b>-0,138</b>	<b>0,718**</b>	<b>1</b>	<b>-0,211</b>	<b>0,314</b>	<b>0,439**</b>
	Sig.	0,354	0,000		0,273	0,104	0,005
<b>D</b>	R	<b>-0,164</b>	<b>-0,098</b>	<b>-0,211</b>	<b>1</b>	<b>0,230</b>	<b>-0,098</b>
	Sig.	0,348	0,580	0,273		0,221	0,582
<b>E</b>	R	<b>0,134</b>	<b>0,064</b>	<b>0,314</b>	<b>0,230</b>	<b>1</b>	<b>0,219</b>
	Sig.	0,458	0,726	0,104	0,221		0,222
<b>F</b>	R	<b>0,191</b>	<b>0,126</b>	<b>0,439**</b>	<b>-0,098</b>	<b>0,219</b>	<b>1</b>
	Sig.	0,209	0,415	0,005	0,582	0,222	

\*\* . Correlation is significant at the 0.01 level

Source: authors' calculations

The data from the questionnaire research obtained from 97 respondents are, as shown in Table 2, the basis for determining the average value and the median of the surveyed indicators. The average amount of corrected VAT is 312 250 CZK, while the median value is 87 500 CZK. The reason for these differences is the value of receivables, which for some respondents was even in the order of millions CZK.

It is worth noting that the proportion of receivables in which the VAT correction have been made and the percentage of the tax correction returned to the state budget is very low. The above mentioned facts are documented by both factors as average values and medians. There is also a repeated situation where the medians, except for analysed indicator F, are lower than the average values.

**Table 2: The Average Values of Analysed Indicators**

Indicator	Average Value	Median
<b>Amount of VAT Correction (A)</b>	312 250 CZK	87 500 CZK
<b>Proportion of Claims in Which the VAT Correction was Made (B)</b>	15 %	10 %
<b>Percentage Proportion of Tax Returned to the State Budget (C)</b>	12 %	10 %
<b>Actual % of Receivables Incurred during the 6 Months Prior to the Bankruptcy Court's Decision (D)</b>	33 %	18 %
<b>Actual % of Claims that Arose in a Period Earlier than 6 months Prior to the Bankruptcy Court's Decision (E)</b>	46 %	38 %
<b>Average Costs of Processing the Agenda of the Amount of the tax Correction for One Claim (F)</b>	2 689 CZK	3 000 CZK

Source: authors' calculations

The survey also showed that in most cases only a small part of the corrected tax was paid by insolvency practitioner to the state budget. The processing of an agenda connected with correcting the amount of tax from receivables is a financial burden for insolvency practitioners which has a negative impact on the amount of funds paid to creditors in the end. Noteworthy in this case is the fact that the median of the average costs per receivable is higher than the average value.

#### 4. Conclusion

The aim of the paper was to evaluate, by method of correlation analysis, the interdependence among selected indicators related to insolvency and the value added output tax correction in case of debtors in insolvency proceedings. The data were obtained through a questionnaire research carried out in the Czech Republic among insolvency practitioners. Based on the analysis of the data obtained from the questionnaire research it appears that the highest dependence is between the proportion of receivables that were subject to tax correction and the percentage of the tax correction that was returned to the state budget.

European Union law allows, under certain conditions, the creditor to make a correction of the output tax on receivables that have been only partially reimbursed or not paid at all. This tool enabling the creditors to obtain at least a part of the value of the unpaid receivable back should be retained despite the negative impact on the national budgets of the Member States (Krzikallová, Krajňák and Bařinová, 2017). Although the results of the analysis show that the proportion of receivables that were subject to the value added tax correction and the proportion of this tax correction returned to the state budget do not reach significant values, the authors recommend to keep this provision in the Czech Value Added Tax Act, and respectively in other related legislation. However, it is appropriate to establish clearer rules for the correction of the value added tax in output or to provide the measures that would reduce the administrative burden and costs of insolvency proceedings. The European Commission is planning to modify the VAT Directive in connection with the possibility of the output tax correction. Defining the clearer rules should enable the better determination of situation when a claim is actually irrecoverable and when a value added tax correction can be made. The authors in a view of the controversy over the use of this provision in the conditions of the Czech Republic recommend that this legislation should be implemented in such a way that it will actually give certainty when applying this provision both to creditors and debtors and their insolvency practitioners throughout the European Union.

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#### References

- [1] Accettella, F. (2016). The Crisis of Companies from the Italian Perspective: Reorganization and Fresh Money. *International Insolvency Review*, vol.25, iss. 3, pp. 179-194.
- [2] Barrow, N. (1988). *Statistics for Economics, Accounting and Business Studies*. London: Longman.

- [3] Bielikova, A. and Paliderova, M. (2016). Receivables Management in the Global Economy. In *16<sup>th</sup> International Scientific Conference Globalization and its Socio-economic Consequences*. Rajecké Teplice: Univerzity of Zilina, The Faculty of Operation and Economics of Transport and Communications, pp.183-190.
- [4] Chamber of Auditors of the Czech Republic (2018). *Mezinárodní auditorský standard ISA 530* [online]. [cit. 2018-2-28]. Available at: [https://www.kacr.cz/data/Methodika/Auditing/Handbook%202010/17\\_ISA%20530.pdf](https://www.kacr.cz/data/Methodika/Auditing/Handbook%202010/17_ISA%20530.pdf)
- [5] Chamber of Deputies. Parliament of the Czech Republic (2018). *Documents of the Chamber*. [online]. [cit. 2018-02-27]. Available at: <http://www.psp.cz/en/sqw/sntisk.sqw>
- [6] CURIA. *Judgement of the Court of Justice of the European Union No. C-246/16 Enzo Di Maura v. Agenzia delle Entrate – Direzione Provinciale di Siracusa from November 23, 2017*. [online]. [cit. 2018-02-27]. Available at: <http://curia.europa.eu/juris/document/document.jsf?jsessionid=9ea7d2dc30dd7aed55e458534305ad0f8ef97ee6d62d.e34KaxiLc3qMb40Rch0SaxyNb3j0?text=&docid=197048&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=119692>
- [7] De Moor, L., Wieczorek-Kosmala, M. and Blach, J. (2016). SME Debt Financing Gap: the Case of Poland. *Transformations in Business & Economics*, vol. 15, iss. 3, pp. 274-291.
- [8] Doś, A. and Foltyn-Zarychta, M. (2017). Socially Responsible Investment Market Size in Poland: The Content Analysis. In *New Trends in Finance and Accounting. Springer Proceedings in Business and Economics*, Springer, Cham, pp. 653-663.
- [9] Florio, C. and Leoni, G. (2017). Enterprise Risk Management and Firm Performance: The Italian Case. *British Accounting Review*, vol. 49, iss. 1, pp. 56-74.
- [10] Hakalová, J., Palochová, M. and Losová, M. (2014). First-time Adoption of International Financial Reporting Standards for Business Corporations Based in EU Member State that Are Issuers of Securities Admitted to Trading on Regulated Market. In *2<sup>nd</sup> International Conference on European Integration 2014*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 192-201.
- [11] Hakalová, J., Palochová, M. and Pšenková, Y. (2016). Selected Aspects of a European Company Incorporated under the European Law. In *3<sup>rd</sup> International Conference on European Integration 2016*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 300-308.
- [12] Hashimzade, N., Epifantseva, Y. (eds.). (2018). *The Routledge companion to tax avoidance research*. London: Routledge, Taylor & Francis Group.
- [13] Jacques, I. (2013). *Quantitative Methods*. Harlow: Pearson.
- [14] Kašík, J. (2015). A Practical Method for Valuing Accounts and Notes Receivable. In *Central European Conference on Finance and Economics (CEFE)*. Herlany: Technical University Košice, Faculty of Economics, pp. 286-291.
- [15] Krzikallová, K., Krajňák, M. and Bařinová, D. (2017). Analysis of Selected Aspects of Insolvency in the Context of VAT Output Tax Correction. In *International Scientific Conference Finance and the Performance of Firms in Science, Education,*

- and Practice. Zlin: Tomas Bata University in Zlin, Faculty of Management and Economics, pp. 439-451.
- [16] Kuznetsova, S. and Kuznetsov, A. (2017). Is Accounting Universal Business Language: Case for Financial Management Control. *Financial and Credit Activity-Problems of Theory and Practice*, vol. 2, iss. 23, pp. 167-174.
- [17] McCormack, G., Keay, A. and Brown, S. (2017). *European insolvency law: reform and harmonization*. Cheltenham: Edward Elgar Publishing.
- [18] Morris, C. (2012). *Quantitative Approaches in Business Studies*. Harlow: Financial Times Prentice Hall.
- [19] Mikušová, M. (2017). To be or not to be a Business Responsible for Sustainable Development? Survey from Small Czech Businesses. *Economic Research-Ekonomska Istrazivanja*, vol. 30, iss. 1, pp. 1318-1338.
- [20] Moravec, L. and Kukulová, G. Investments Allocation Tax Factors in Pre-crisis Time. (2014). In *11<sup>th</sup> International Scientific Conference European Financial Systems 2014*. Brno: Masaryk University, Faculty of Economics and Administration, pp. 396-402.
- [21] Newbold, P. (2013). *Statistics for Business and Economics*. Harlow: Pearson.
- [22] Pickhardt, M., Prinz, A. (eds.). (2012). *Tax Evasion and the Shadow Economy*. Cheltenham: Edward Elgar.
- [23] Schenk, A., Thuronyi, V. and Cui, W. (2015). *Value Added Tax. A Comparative Approach*. New York: Cambridge University Press.
- [24] Sobotovičová, Š. (2015). Output Tax Correction in Receivables from Debtors in Insolvency Proceedings. *International Advances in Economic Research*, vol. 21, iss. 1, pp. 129-130.
- [25] Sucháček, J. Sed'a, P. Friedrich, V. and Koutský J. (2017). Regional Aspects of the Development of Largest Enterprises in the Czech Republic. *Technological and Economic Development of Economy*, vol. 23, iss. 4, pp. 649-666.
- [26] Sulik-Gorecka, A., Strojek-Filus, M. and Maruszewska, E. (2017). IFRS Valuation Models vs. Business Entities Practice - a Case of Polish Publicly Traded Enterprises. In *14<sup>th</sup> International Scientific Conference European Financial Systems 2017*. Brno: Masaryk University, Faculty of Economics and Administration, pp. 356-364.
- [27] Široký, J. and Maková, K. (2014). Economics Crisis and the Movement of the Value Added Tax Rates in the European Union Member States. In *2<sup>nd</sup> International Conference on European Integration 2014*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 684-692.
- [28] Tošenovský, F. (2014). Distance-Based Optimization Approach to Building Competitiveness. In *2<sup>nd</sup> International Conference on European Integration 2014*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 715-722.
- [29] Tošenovský, F. (2016). A Probabilistic Approach to Setting Weights in a Weighted-Average Product Evaluation. *Economic Computation and Economic Cybernetics Studies and Research*, vol. 50, iss. 4, pp. 267-284.

## **Importance of European Social Policy in the Dimension of Unemployment as a Long-term Phenomenon in Selected Regions of the European Union**

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### **Abstract**

*Unemployment is a natural consequence of market economy evolution. It represents cyclical development of the economy, which brings also negative economic and social consequences, therefore one of the goals of social policy is to reduce the number of unemployed people. The aim of this paper is to present an analysis of the current state of unemployment in selected regions of the European Union, namely in the Czech Republic and the Slovak Republic. The paper further focuses on the importance of European social policy and its opportunities to participate in reducing unemployment in the Member States of the European Union - in the Czech Republic and the Slovak Republic. In this contribution, we apply the statistical method to analyze data from the Statistical Office of the Slovak Republic concerning unemployment in Slovakia and, in case of the Czech Republic, we analyze data from the Czech Statistical Office. We compare the structure of job seekers by comparison method.*

**Keywords:** *European regional policy, European Union, member states of the European Union, unemployment*

**JEL Classification:** *J21, J60, R11*

### **1. Introduction**

In the present paper we are dealing with the phenomenon of unemployment. In the first chapter, we focus our attention on the impacts, which unemployment brings with itself. How it affects an unemployed person - job seeker as well as society and the state. The method of document and professional literature studies we apply in this chapter in order to provide well-founded interpretation of the subject matter. The aim of the second chapter is to provide up-to-date and accurate information on the current state of unemployment in the Slovak Republic and the Czech Republic. In the chapter we apply the statistical method and analyze official data obtained from the statistical offices. We identify regions with the highest recorded unemployment rate in Slovakia and the Czech Republic. The third chapter deals with social policy at the European Union level. We apply method of document and professional literature studies, identify the impacts of selected processes at European level to the level of the Member States and we characterize the main causes of high unemployment at the level of the European labor market.

## 2. Consequences of Unemployment

Defining the concept of unemployment is relatively demanding, and several authors present their own definitions. Adamkovičová (2016) defines the term unemployment as follows: *"Unemployment is a socio-economic phenomenon, definition of which is based on the fact that a person who is able to work is discarded out of paid employment, not satisfied with his/her dismissal and looking for a new paid job."* Palcrová and Novák (2016), comment the unemployment rate, which lists the unemployment values: *"In general, the unemployment rate is understood as the portion of unemployed people in gross working population (employed and unemployed)".* Čaplanová and Martinčová (2013) correctly point out that unemployment is natural consequence of the development of market economies linked to globalization of world economy based on free decisions and democracy linked to the need for labor mobility. At the same time, it reflects cyclical development of the economy and can gain uncontrollable proportions. These can bring serious economic and social consequences. Tomanová (2013) identifies problems that unemployment often causes: loss of work habits, social isolation, loss of motivation, family tension, feelings of helplessness, decline in income associated with constraint, depression, alcoholism, drug addiction. Unemployment is loss not just for an unemployed person who loses, among other things, self-confidence and the amount of his/her pension, but the society is also losing because total output is below the potential level.

### 2.1 Impact of the Unemployment Support System in Practice

The governments of the Czech Republic and the Slovak Republic inherited social security system in 1993, which was applied in the former Czechoslovakia. Disintegration of Czechoslovakia had a negative impact on employment in both successor states, especially in 1993 and 1994 (Outlý et al., 2011). During the 1990s, this system was re-adapted and adjusted in both countries in response to the changing economic, political and social conditions of both countries. Importance of the rescue network systems applied in both the Czech Republic and the Slovak Republic fulfills, according to the World Bank Report, two main tasks: *"It provides income for people who are unemployed and whose income falls below the poverty line and aims to motivate these individuals to find employment and gain their own means of subsistence."* (World Bank Report, 2001). *"They are just the social problems that are the subject of our paper, while" social "can be understood in the narrower as well as in the broader sense. In the narrower sense of the word what is meant is the competence of the resort of social affairs, in the broader sense of the word social means the connection to society."* (Bočáková, Kubičková, 2015). Concerning unemployment and rescue network system, it is important to highlight demotivating effects that arise in connection with benefits under the social security system and social assistance and support system scheme. At the same time, we must emphasize that social assistance and support programs play an important role in preventing poverty (Bočáková, 2015). The success of future reforms of social network systems depends primarily on how governments can deal with the question of how to eliminate demotivating effects without jeopardizing the protective dimension of social assistance and support system. Practice shows that demotivating effects are present in both countries, which is reflected in the preference of staying unemployed and receiving social support than active job searching and subsequent entry into employment from the position of registered job seeker. The reform should aim to make employment more attractive than unemployment. However, we would like to point out the negative impacts of possible reduction of social support, which would result in the spread of poverty.

### 3. Current State of Unemployment in the Slovak Republic and the Czech Republic

"Every region is unique and differs from the other by the level of economic development, living standards of its inhabitants, unemployment rate and by employment possibilities. Regional policy is a strategic investment policy which focuses on all regions and cities in the European Union. The aim is to boost economic growth and to improve the quality of people's lives." (Rentková, 2017). The analysis of statistical data from the Statistical Office of the Slovak Republic shows the following findings: Recorded unemployment rate in the whole Slovak Republic reached 5.94% in December 2017. The number of job seekers available has reached 161 915. The number of economically active population was 2 725 838. In terms of regional segmentation, unemployment exceeds 5% in three self-governing regions: Banskobystrický with 8.6%, Prešovský with 9.6% and 9, 9% in Košický region. District segmentation shows that the unemployment rate exceeds 10% in 16 districts. All 16 districts are concentrated in three self-governing regions: Banskobystrický (five districts with unemployment rate above 10%), Prešovský (six districts) and Košický (five districts) (Statistical Office of the Slovak Republic, 2018). Summary of the above data is given in Table 1. From the analysis of the available statistical data of the Czech Statistical Office, we found that the registered unemployment rate reached 3.7% in December 2017, which represents 280,620 job seekers. Unlike in the self-governing regions in Slovakia nor in one of the regions in the Czech Republic, the unemployment rate is higher than 6%. Moravian-Silesian region has the highest rate with 5.77% followed by Ústecký region with 5.39%.

**Table 1: Districts with the Highest Unemployment Rate in the Slovak Republic and the Czech Republic**

the Slovak Republic				the Czech Republic			
No	District	Region	Unemployment rate 12/2017	No	District	Region	Unemployment rate 12/2017
1.	Rimavská Sobota	Banskobystrický	18.4%	1.	Karviná	Moravskoslezský	8.1%
2.	Rožňava	Banskobystrický	16.2%	2.	Most	Ústecký	7.3%
3.	Kežmarok	Prešovský	15.4%	3.	Jeseník	Olomoucký	7.2%
4.	Revúca	Banskobystrický	14.8%	4.	Bruntál	Moravskoslezský	7.0%
5.	Trebišov	Košický	13.6%	5.	Ostrava-město	Moravskoslezský	6.9%
6.	Vranov nad Topľou	Prešovský	13.6%	6.	Znojmo	Juhomoravský	6.7%
7.	Sobrance	Košický	12.9%	7.	Hodonín	Juhomoravský	6.2%
8.	Poltár	Banskobystrický	12.8%	8.	Chomutov	Ústecký	5.9%
9.	Medzilaborce	Prešovský	12.8%	9.	Ústí nad Labem	Ústecký	5.9%
10.	Svidník	Prešovský	12.7%	10.	Děčín	Ústecký	5.5%

Source: Statistical Office of the Slovak Republic; Czech Statistical Office



Abnormal unemployment rates in member states of European Union are reported for persons with severe disabilities in the long term. In the Slovak Republic, this group of job seekers participates in 4.09% of the total number of registered jobseekers, which represents 6,626 people. In the Czech Republic, the number of people with severe disabilities represents 16.4% of the total number of job seekers. Graduates represent 5.7% of job applicants in the Slovak Republic (9,230 persons), higher portion than in the Czech Republic where graduates account for 4.1% (8,151 persons) of total number of registered jobseekers. In both member states of the European Union, the number of women exceeds the number of men in the applicant's records. In the Slovak Republic it is 53.1% and in the Czech Republic 50.2%.

#### **4. Importance of European Social Policy in Reducing Unemployment in Member States of the European Union**

For the first time, the European social model was used as a concept in the 1980s by the French economist and politician Jacques Delors, who at that time held the post of President of the European Commission. This model should be an alternative to the American market and the individualistic system. It was based on the assumption that economic growth is connected with social wealth and its key attributes include social dialogue, democratic establishment, personal freedom, adequate social protection and equal opportunities for all. Fojtíková and Vahalík (2016) writes: *"Combination of new technologies, social adaptation, trade liberalization and innovation led to intensified economic, social and political interdependence among nations."* According to Jepsen and Pascual, European social model is not just a political concept, it is also an economic concept. Its ambition is to increase the legitimacy of the further economic and political integration of the European Union (2005). According to Beblavý (2012), implementation of European values in the social field should help to create a pan-European consensus at the transnational level.

The European Union had a major impact on employment since its inception, in particular by creating a single labor market. Today, the whole European social policy is under strong pressure from globalization processes. The main contribution to job creation process was the Maastricht Treaty (1992), which created job creation policies as well as convergence criteria (Zeitlin, Trubeck, 2003). Among the priorities of this strategy are: Convergence of employment policies in the European Union, support for increasing the number of quality jobs and improving the labor market structure at national - and subsequently at European level. It is important to recall that the European Union model is composed of three basic elements: a common market, a certain institutional arrangement and so-called balancing measures in the social field. The question remains, what are the priorities of this model, whether the emphasis will be on the common market and free competition or on social values, or on a combination of these priorities (Krebs, 2010). The causes of long-term unemployment at the level of the European labor market were investigated by Palíšková (2014), who identified four key reasons:

- high labor costs - Combined high wages with relatively high labor taxes and high taxations for health and social insurance. This is a fundamental problem linked to the high legal protection of workers and the concept of a European social model;
- technology development - generates structural shifts in the economy, while replacing work with capital, leading to the disappearance of jobs in industry, while the services sector and the quaternary sector do not create enough new jobs in most member states;
- inconsistency between supply and demand on the labor market;
- very low mobility of workers, both inside and outside the EU.

Currently, the unemployment rate among the countries of European Union is the highest in countries of southern Europe: in Greece, 20.9%; in Spain 16.3% and 11.1% in Italy. On the contrary, the lowest unemployment rate is recorded in the Czech Republic, 2.4%. There are eight countries behind the Czech Republic with unemployment rate of less than 5%. These are Malta, Germany, Hungary, Netherlands, Great Britain, Poland and Romania. According to data from November 2017, the unemployment rate in Slovakia reached 7.5% - the 10th highest rate within the European Union (Eurostat, 2018).

## 5. Conclusion

Through the creation of a single labor market, the European Union has made a significant contribution to reducing unemployment in its member states and created a room for increasing labor mobility. Today the European Union is under the pressure of globalization processes and reducing unemployment combined with maintaining its competitive ability in a global environment and needs to find an effective compromise that will continue to expand the social standard of EU citizens on the one hand and social rights and social security won't represent barriers to creating new jobs on the other hand. Unemployment is the object of European Union member states regional policy, in this context Horváth (2003) states: "*The European Union member states are increasingly approaching implementation of the concept of their own regional policy. They seek to reduce the differences in living standards between regions and fight other negative factors, such as high levels of regional unemployment.*". Social entrepreneurship has a great potential to reduce unemployment. We agree with Blaha's opinion that "*The social economy could bring the vanishing values of solidarity and fair distribution of profits and ownership, democratic participation in the functioning of the economy as well as a greater degree of stability and efficiency to the EU. Social entrepreneurship could bring benefits to long-term unemployed and socially marginalized groups.*" (Blaha, 2014).

## References

- [1] Adamkovičová, B. (2016). Nezamestnanosť ako nový fenomén transformačného obdobia (Unemployment as a new phenomenon of transformation period). In Potočný, M. and Vendžúr, J. (eds.). *Fenomén zmien v spoločnosti a jeho dopad na sociálno-kultúrnu a ekonomickú dimenziu (The phenomenon of society changes and its impact on socio-cultural and economic dimension)*. Brno: Tribun EU, pp. 5-9.
- [2] Beblavý, M. (2012). *Sociálna politika (Social policy)* [online]. [cit.2018-02-15]. Available at: <https://www.scribd.com/doc/253976108/Socialna-Politika>
- [3] Blaha, L. (2014). *Európsky sociálny model (The European social model)*. Bratislava: VEDA.
- [4] Bočáková, O. (2015). *Sociálna politika a sociálne zabezpečenie (Social policy and social security)*. Brno: Tribun EU.
- [5] Bočáková, O. and Kubičková, D. 2015. *Satisfaction of the inhabitants with selected aspects of social policy in the region*. In Klímová, V., Žítek, V. (eds.). 18th International Colloquium on Regional Sciences. Conference Proceedings. Brno: Masarykova univerzita, pp. 391–397. DOI: 10.5817/CZ.MUNI.P210-7861-2015-52.
- [6] Čaplánová, A. and Martincová, M. (2013). *Inflácia, nezamestnanosť a ľudský kapitál z makroekonomického pohľadu (Inflation, unemployment and human capital from macroeconomic point of view)*. Bratislava: Wolters Kluwer.

- [7] Český statistický úřad (The Czech Statistical Office) (2018). *Zaměstnanost, nezaměstnanost (Employment, unemployment)* [online]. [cit.2018-02-15]. Available at: [https://www.czso.cz/csu/czso/zamestnanost\\_nezamestnanost\\_prace](https://www.czso.cz/csu/czso/zamestnanost_nezamestnanost_prace)
- [8] Eurostat. (2018). Unemployment rates, seasonally adjusted, January 2018 [online]. [cit.2018-03-24]. Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Unemployment\\_rates,\\_seasonally\\_adjusted,\\_January\\_2018\\_\(%25\)\\_F2.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Unemployment_rates,_seasonally_adjusted,_January_2018_(%25)_F2.png)
- [9] Fojtíková, L. and Vahalík, B. (2016). *Trade in Value Added and Its Impact on the Czech Foreign Trade*. In Kovářová, E., Melecký, L. and Staničková, M. (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, Faculty of Economics, pp. 229–238. WOS:000387986300024.
- [10] Horváth, P. (2003). Regionálna politika v Európskej únii (Regional policy in the European union). In Csányi, P. and Horváth, P. (eds.). *Sociálne dimenzie regionálneho rozvoja (Social dimensions of regional development)*. Trnava: Slovenská spoločnosť pre regionálnu politiku pri SAV, pp. 49-54.
- [11] Jepsen, M. and Pascual, A. S. (2005). The European Social Model: an Exercise in Deconstruction. *Journal of European Social Policy*. vol. 15, pp. 231–245.
- [12] Krebs, V. et al. (2010). *Sociální politika (Social policy)*. Praha: Wolters Kluwer.
- [13] Outlý, J. et al. (2011). *Prosazování národních zájmů členských zemí EU. Česká republika, Maďarsko, Polsko, Slovensko a Slovinsko (Promoting the national interests of EU member states. Czech Republic, Hungary, Poland, Slovakia and Slovenia)*. Olomouc: Univerzita Palackého v Olomouci.
- [14] Palcrová, Š. and Novák, V. (2016). Metodické změny ve výpočtu ukazovatelů nezaměstnanosti (Methodological changes in the calculation of unemployment indicators). In Klímová, V. and Žitek, V. (eds.). *XIX Mezinárodní kolokvium o regionálních vědách (International colloquium on regional sciences. Collection of contributions)*. Brno: Masarykova univerzita, pp. 392–401. DOI: 10.5817/CZ.MUNI.P210-8273-2016-50.
- [15] Palíšková, M. (2014). *Trh práce v Európskej únii. Historický vývoj, aktuální trendy a perspektivy (Labor market in the European Union. Historical development, current trends and perspectives)*. Praha: C. H. Beck.
- [16] Rentková, K. (2017). Regional Development Planning in the Slovak Republic. In *IOP Conference Series: Materials Science and Engineering. World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium – WMCAUS*. vol. 245, iss. 6. DOI: 10.1088/1757-899X/245/6/062013.
- [17] Správa svetovej banky č. 22 351 – SK (World Bank report no. 22 351 – SK) (2001). *Slovenská republika: štúdiá o životnej úrovni, zamestnanosti a trhu práce (Slovak Republic: Study on standard of living, employment and labor market)*. Bratislava: Slovenská spoločnosť pre zahraničnú politiku.
- [18] Štatistický úrad SR (Statistical Office of the Slovak Republic) (2018). *Mesačná štatistika o počte a štruktúre uchádzačov o zamestnanie za mesiac december 2017 (Monthly statistics on the number and structure of job seekers for the month of December 2017)* [online]. [cit.2018-02-18]. Available at: <https://slovak.statistics.sk/wps/portal/ext/themes/demography/labour/news/>

- [19] Tomanová, M. (2013). Nezamestnanosť – neželaný fenomén, ktorý nešetrí ani vzdelaných mladých ľudí (Unemployment - an undesirable phenomenon that does not save even educated young people). *Výchovávateľ' (Educator)*. Vol. LXI, No. 5-6, pp. 2–8.
- [20] Zeitlin, J. and Trubek, D. M. (2003). *Governing work and welfare in a new economy: European and American experiments*. Oxford: Oxford University Press.

## The Political Economy of Brexit

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### **Abstract**

*Brexit is already a fact – the UK shall notify to the withdrawal of their country from all the structures of the EU. The decision of the British voters has a major impact both on the UK, so the development in Europe. However, not only impact decisions, but also the causes of Brexit are many and on both sides of the English Channel. Demarcation of political economy isn't clear-cut – there is a dividing line between politics and economics concept. In the decision of the British played their role to many factors, which can be classified into motto – let's take back control. The analysis of the costs and benefits of Brexit should serve to facilitate the understanding of the further development of the two actors - the UK and the EU. Here I will focus mainly on the economic aspects.*

**Keywords:** *Brexit, causes of Brexit, effects for the UK and EU economic, institutional, political*

**JEL Classification:** *E60, F40, F50, P00*

### **1. Introduction**

The announcement of the referendum by David Cameron turned out to be the opening of Pandora's Box. I do not know whether it was just a surprise or a shock from the result of voting, though so tight. The decision of British voters has far-reaching consequences for more than half a billion EU citizens. What were the reasons for the voters' decision and the consequences of their choice? Is the British voter postmodern? It wants its own identity, defining itself against continental Europe against the EU and its bureaucratic apparatus, but wants its, which other than anywhere else. Britain is something else...

The following article tries to analyse Brexit's input-output using political economy.

### **2. Political Economy as a Theoretical Framework for Reflections on the Brexit**

The discipline of political economy is nothing new under the sun - for the first time this term was used in 1615 by Antoine de Monchrétien. Political economy nowadays examined the relationship between economic theory and practised policy, or the effects of practical political decision (Strange, 1988, p. 19). For political economy, it is crucial to understand how economic, social and political phenomena affect the decisions of people and institutions (Germain, 2014, p. 6). In general, political economy applies the economic methodology to the human decision-making, explains social conduct through the apparatus of the economic instruments. But not only – is the political economy tracking the impact of political decisions on the breadth of the social and economic spectrum, including psychological responses.

Brexit is connected very closely with the European Union's development, with the future of both the EU and UK. European political economy spread broad framework ranging from European integration theory, public choice, comparative politics and policy-making approaches (Talani, 2014, p. 7). The political economy of Brexit is generated by Britain's traditional isolationism, by Britain's non-euro membership while possessing the offshore financial centre (Thompson, 2017, p. 434). The critical political economy on UK side is growing out of fear of a divergent development of views on integration between the mainstream in the UK and the EU. The deepening of the integration steps, the building of a strong institutional apparatus, taking over many powers of national governments, is becoming the new constitutionality of Europe (Gifford, 2016, pp. 780-781) against which the British are opposed and that leads to creation strong Euroscepticism as a base of distinctive British critical political economy.

These definitions of political economy are important for understanding the results of the referendum in the UK in June 2016 about their staying/leaving the European Union.

### **3. Causes of Brexit**

The reasons for the UK voters' decision to leave the EU may vary. I will try to outline the most prominent for the British, although for other Europeans it may not be an adequate decision so important. But they should not ignore the specifics of every nation in the individual EU countries. It is not the goal of examining the differences in elections in the UK, although they have a great deal of value. I'm considering Brexit as a whole.

#### ***3.1 The Identity Problem of the British in the Context of European Integration***

The British public has always been wary of the European continent. Some vigilance of the English towards Europe can be traced back to the 16th century, when institutional changes such as the previous accumulation of capital (Smith, 1776), the religious reform of Henry VIII take place within the Kingdom of England, and the real colonisation of Ireland 1541. Its resources largely generated Super-power's growth of England, hence the detachment from the European mainland. Especially England people have always felt like reformers in the British community - thanks to Protestantism as a state religion since the first half of the 16th century, thanks to the industrial revolution and the maritime success of the Francis Drake of the Elizabethan times, so no one else needed their development. It seems that in Britain this feeling is inherited from generation to generation up to now.

At first, the British did not want to participate in the European integration process at all, only after finding the economic disadvantage of being out in the 1960s, they rethought their attitude. After two unsuccessful attempts to join the EC, they eventually joined in 1973, but two years later the first referendum on British participation in the European integration community took place. The results of this referendum confirmed the original decision and the British decided to stay in the European Community. But "UK never fully embraced the European project" (Geoghegan, 2016, p. 3).

Britain has always been a little bit aside because fears of national identity disruption in the melting pot of European integration have been felt very strongly. After all, the splendid isolation as a concept of the foreign policy of Prime Minister Benjamin Disraeli has been in place since the middle of the 19th century. The accent on strict sovereignty in many aspects of economic, not only security, development has led to the negotiation of many exceptions within European integration. In a nutshell, I will only highlight the most opting regimes - the

exception from the Schengen system, initially the exception from the Charter of Social Rights of Workers and, above all, the opting clause on EMU membership. The last was the objection to the possible extensive interpretation of the Charter of Fundamental Rights when the Lisbon Treaty was approved. Of course, the most visible is the so-called British rebate, which was agreed by Margaret Thatcher in Fontainebleau in 1984, and which would be used by other net payers in the budget, but has always been used only by Britain. And even under the rule of the most pro-European British Prime Minister Tony Blair. For his first government, Gordon Brown, as Treasury Minister, set five conditions, the criteria for the potential accession of the UK to the EMU, all formulated to benefit the UK economy. This was an example of a rational approach to European integration, not just its principle - solidarity. But it is purely an economic approach, not a political one. And it resonates with British interests. "The UK has never been at ease with either its membership of the European Union or the broader idea of European Integration" (Phinnemore, 2016).

### ***3.2 Impacts of the Global Financial Crisis on the British Economy***

The global financial crisis of 2008-2010 has hit hard the British financial sector, and the whole economy and the Bank of England's responded to the crisis by expansionist politics – compared to the ECB in these days. London City, as one of the world's financial centres connected with others, has seen a significant fall. However, the London financial sector represents euro's off-shore centre in Europe, maybe the most important European financial trade. Although the UK is not a member of the EMU, the Euro-zone crisis has undoubtedly impacted on domestic politics and has seen its rise in Euroscepticism (Gifford, 2016, p. 779).

When the financial crisis grew in the Euro-zone crisis, and the economic practices of the southern EU countries were revealed, the British understood this development as the crisis of the whole integration project. The main reason was the non-systemic steps taken by Germany and France, including ECB to save the southern banking sector at the expense of their taxpayers, which is unimaginable for the British. Therefore "the 2008 financial crash and the euro-zone crises put a time-bomb under sustainability of Britain's membership of the EU" (Thompson, 2017, p. 446). The British obviously did not want to pay the bills for the other, because after all David Cameron refused to sign a Fiscal pact commitment fiscal responsibility within the whole EU, not just the EMU at the beginning of the year 2012. Overall, the pressure on narrower monetary and fiscal integration, which has emerged as a result of the crisis, is unacceptable for the British. The development of monetary and, in fact, fiscal consolidation of national policies leading to economic harmonisation and, consequently, to the gradual federalisation of Europe is utterly unimaginable for the British.

The problem has also been the inability to mobilise other non-euro states into the alliance against the German-French tandem towards European integration towards a fiscal union. Of the non-member countries of the EMU, only two countries were the strong negotiating partners within the EU, namely Denmark with the same opting regime as UK, and Sweden. Other EU Member States outside the EMU come from the new member states and are thus significantly weaker negotiating partners. If more than four countries joined the EMU by the start of the crisis, the euro area now includes 19 EU countries out of a total of 28. This has reduced the bargaining position of Britain. After all, another issue between the EU and the UK was a proposal to introduce a financial transaction tax that would hurt the City of London, which Cameron averted but weakened the UK's position within the EU as opposed to Germany, France. The logical response could be to return the check to Britain.

### **3.3 Growing Immigration to the UK, Whether Work or Social**

Immigration to the UK area from other EU's countries, initially mainly from new member states, or later from South Europe, i. e. from economies affected by financial crises – it is the next logical cause of the decision to leave the EU. These are other very important factors deciding the British people about their future in the EU - a feeling of nonconformity, social tension, and the arguments of the nationalists that the foreigners are taking their jobs. The paradox is that in this period the British economy, in any case, not worried about unemployment, on the contrary, the lack of certain professions.

It is true that Britain under the leadership of Tony Blair opened its labour market immediately to the new member countries of the EU in 2004 with the connection of so-called Big-Bang Enlargement of the EU - as one of the three states of the EU. Within the "Blair's" Labour party began to deepen the trench misunderstanding, since the traditional members were expecting more protection of their interests (the government's first priority should be its citizens) contrary to the modernist most of the party professing cosmopolitanism, and the benefits of globalization (Parker, 2017, pp. 479-480). As regards migrants from the southern EU countries, this was mainly due to the collapse of their economies as a result of the global financial crisis of 2008-2010, which has grown in the southern EU countries in the Euro-zone crisis. This, of course, has reinforced the belief of the vast majority of the British that a single currency and a common monetary policy are pointless and harmful. The so-called the European migration crisis, culminating in 2015-2016, only raised the problems. Almost all migrants at that time dreamed of the two final destinations of their emigration - Germany and Britain. The UK has a relatively accommodating migration system from Commonwealth countries, leading to a steady stream of migration from this part of the world. Mass immigration from other countries has led to the doubts of the British about whether greater regulation or liberalism is so typical of the New Labour Party governments.

### **3.4 EU Budget and British Contributions**

The main motto for opponents of European integration was how much the UK contributes to the EU's common budget. Simply put - many. Britain is the second most powerful EU economy, so its contributions to the common budget are very high. Not only did Boris Johnson or Nigel Farage use the numbers in the pre-referendum campaign to prove how "Brussels" slashes Britain and how much money the UK must send to the common budget. Those numbers were not deliberately true but exaggerated. In spite of many warnings by other members of the government or parliament that this was manipulation, Boris Johnson insisted on it-and paid off, for the British obviously believed it. Real numbers are as follows (European Union [online], 2018): British contribution to the EU budget total in 2016: 12.760 billion Euros, or 0.55% of UK GNP; EU spending in the UK total: EUR 7,052 billion, i. e. 0.3% UK GNP, the net costs of membership for the UK amounted to 5,708 billion Euros, it means 0.246% of UK GNP. In contrast, UK public expenditure is more than five times bigger than the EU budget, more precisely 42% of GNP (European Commission [online], 2014). A lot of commotion for nothing? Not quite - if you exaggerate false figures in your favour, and if you claim that this money could be used immediately in problem areas such as health care, then you are guaranteed success. Voters are looking for easy solutions.

Setting the budget for the next period after 2020 is a challenge. How many members of the EU? What about the UK as the second largest contributor? The EU asks for higher payments to the budget due to Brexit, as the failure of the UK contribution could jeopardise the funding of many integration projects. Member States' responses are diverse - ranging from refusing to increase compulsory levies for approval by poorer countries. Eight of the new Member States



(excluding the Baltic States and the Mediterranean island countries) are more likely to increase their contributions. However, there is still a variant that, after Britain's departure from the EU, the UK government will continue to contribute to the EU budget if it wants to keep its firms on the EU's internal market.

#### **4. Effects of Brexit**

The impacts of the British decision to leave are hardly quantifiable, as the UK exit scenario is not known. I'm afraid that even Theresa May does not know exactly what to do with the EU because the mood in the UK is changing. And also, estimates of Brexit's impact on the British economy are being developed, and the cost numbers are very unfavourable, which neither voters, nor the government, nor a general idea.

It is necessary to consider the effects both towards the UK and the EU. I will only focus on the economic impacts.

##### ***4.1 Input-Output Analysis of Brexit for the UK***

The decision of the British voters to leave the EU at a close ratio of 51.9% against 48.1% for their continued existence has far-reaching consequences not only for the whole of Britain and its individual historical countries but of course also for the EU. Statistics are a treacherous methodology - out of five British territories voted for leave two, while Scotland 62 %, Northern Ireland 55.8 %, and Gibraltar 95.9 % of the votes to remain (Phinnemore, 2016; Geoghegan, 2017). The consequences are and will be far-reaching and yet not fully predictable.

##### ***4.1.1 Access to the Internal Market***

Britain only represents partial changes in its participation in the EU internal market, in the sense of excluding those lucrative as financial and legal services, else automotive industry that the UK would manage itself. But the current regime of trade in industrial production would like to leave it in the internal market regime. The European Commission has a different opinion, supported by the supreme representatives of the EU Member States – it couldn't be just about picking cherries from the cake, new relations must be set fairly for both sides - the EU and the UK. The EU has taken a position „no negotiation without notification“, and intends to act on the internal market as a whole. If Theresa May will insist on her, there is a risk of Britain losing all four freedoms of the internal market, which could be a considerable loss for the British economy. While it is true that British exports to the EU have declined, they are still around 45%. For objectivity, it has to be acknowledged that Britain has diversified its exports outside the EU since 2000, not just a referendum. But so are the EU markets vital for Britain. Conversely, the EU needs an extensive and advanced UK market. This is an addictive relationship that is beneficial to both parties and serves as an incentive for further development.

##### ***4.1.2 Labour Markets***

Britain has opened up its labour market to new countries in 2004 not because it feels solidarity but because it had - and still has a great structural disproportion in the labour market. British economies have been sharply developing since Margaret Thatcher, involved in globalisation, lacking many professions, including those highly qualified, such as physicians, nurses, or perhaps their expansion in the financial sector or new technologies.

In addition to the specific professions of a country with a high standard of living and low unemployment, Britain has a shortage of unskilled labour willing to do subordinate, inferior

work. Over the past twenty years, the British economy has been able to absorb an incredible amount of foreign workers who have contributed not only to their own development but also to the growth and stability of the British economy, and have often filled places that have not been among the British. It is, therefore, interesting and even less understandable why the in-work workers have played such an important role in the left campaign, although immigration and labour migration are likely to emerge. The agricultural sector has a special position in labour migration, since it only employs a small percentage of the British population, while the largest share belongs to workers from other EU countries. It is very little paid work that the British do not want to receive. This work is often carried out by students or residents of the eastern EU countries who are willing to go for significantly lower wages. Interestingly, the anti-European campaign objected that migrant take the British job, but not that they are pushing wages down, below the minimum wage...

Employers have warned before the referendum that shrinking from the free movement of people in the internal market will mean a substantial labour shortage for the British economy. These were Brexit's negatives for the British economy; it is upright to mention the pros.

#### *4.1.3 Payments to the Common Budget*

The most strikingly perceived effect of the Brexit will be the absence of contributory obligations in the common EU budget. Given the position of Britain as a clean contributor, it will certainly be very pleasant. Certainly, even in Britain, you can find signboards with the announcement that this project has been co-financed by the EU, but they are far less than in other countries. As has been mentioned above, Britain is more contributing to a common bill than it can draw from it. Therefore, the abolition of this duty is certainly the supposed goal of Brexit.

#### *4.1.4 Less Bureaucracy*

An absolutely indisputable benefit, even for the EU's supporters, must be the abolition of the "Brussels bureaucracy" dictate. And with that, Britain has always had great problems, especially as a country without a written constitution. Although I do not want to question this position, only two things are on the brink: this bureaucracy also helped to create greater transparency for the British, because that "Brussels" is made up of representatives of the member countries; growing institutionalization is also evident to international organizations outside the EU, so the UK will not be able to do it anyway.

### **4.2 Input-Output Analysis of Brexit for the EU**

There is no doubt that the exit of such a strong economy from the Community will damage the whole of the Union's economy. I am afraid that the negative side of the EU outweighs both economic performance and policy-making.

#### *4.2.1 Internal Market*

The left of the British economy and its firms will weaken the performance of the EU's internal market, as London as a financial centre is likely to become the external financial market. This, of course, will increase the cost of trading on the financial markets. Yes, there are certain hopes for a hard Brexit that some of the corporate firms move at least partially to Frankfurt but cannot rely on it. The liberalisation of financial services is closely linked to the movement of capital - it cannot be assumed that there would be any restriction on the part of the EU at a time of virtually free capital flows in a global dimension.

Absolutely limiting the movement of people, as this was one of the demands of Brexit supporters. In this case, the cards are in the hands of the British - they are afraid of their citizens of continental Europe, the British somehow assume that nothing will change for their citizens in the EU.

The issue of the freedom of movement of goods is probably the least problematic since trade liberalisation has been an international trend since 1947. Despite the British thought, whether they want EU customs union or rather trade under WTO rules. However, the loss of the 64 million potential consumer markets is a big and unpleasant change.

#### *4.2.2. Labour Market*

The European Union does not even focus on the labour migration agreement as a guarantee of the rights of workers already living and working in Britain. Theresa May promises to protect those who are already working in the UK but reserves the right to control newcomers. Negotiations on both sides are processing.

#### *4.2.3 Budget Contributions*

It is inconceivable that the departure of Britain will come to the EU as its second largest donor. It is already under discussion how to replace the UK postponement or how it will be addressed. The European Commission is pushing for the UK to contribute to the EU budget even after its eventual departure, at least within the agreed financial perspective in force in 2020. The British side seems to agree. The question, therefore, relates to the post-2020 period - reflections on another form of the budget are already under discussion.

#### *4.2.4 Policy-Making Processes*

Despite many British obstructions and bargaining for their exceptions, in the case of Britain leaving the EU, the European Union will lose a rational member who defends at least partially the full institutionalisation of European integration. It is true that when the British understood that they would not stop further institutionalisation, they focused on negotiating their demands, but in any case, they were an example for other potential opponents of closer integration.

In addition, the British are afraid of too strong a "Europe", meaning Continental Europe and particularly too strong Germany (Kučerová, 2015, p. 147), whose roles are rising alongside the growing problems of the European Union, especially the Euro-zone. The economic and political power of Germany has turned out for most of Britain in the face of both the Euro-zone crisis and the European migration crisis.

## **5. Conclusion**

Brexit means a breakthrough in the development of European integration, is clearly a proof of a spill-back effect, the fatigue of integration. The asymmetry of information has proven to be significant for British voters - many for the UK leaving the EU admit that they did not have enough information and that they chose emotionally rather than pragmatically. The outcome of the referendum itself, the discussion of the new situation and the reflections on the future has serious implications for the development of the participating partners.

Economics policies always measure the costs and benefits of any decision. The political economy of European integration and critical political economy are trying to specify the input-output analysis.

In the discussions and reflections of both parties, possible scenarios for the further setting of mutual relations are discussed. But future models of Britain and the EU will be the subject of further research. One thing is clear - the withdrawal of Britain from the EU will lose both sides. The very close ratio of voting results is reflected in the sharp controversy of the British themselves - "UK cannot expect to abandon membership and simply walk straight into whatever new relationship it wishes to have the EU" (Phinnemore, 2016).

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### **References**

- [1] European Commission (2014). *Financial Programming and Budget* [online]. [cit.2018-02-22]. Available at: [http://ec.europa.eu/budget/mycountry/UK/index\\_en.cfm](http://ec.europa.eu/budget/mycountry/UK/index_en.cfm).
- [2] European Union (2018). *United Kingdom Overview* [online]. [cit.2018-02-22]. Available at <https://europa.eu/european-union/about-eu/countries/member-countries/unitedkingdom>.
- [3] Geoghegan, P. (2016). All Changed, Changed Utterly. *Political Insight*, Vol. 7, Issue 2, p. 3.
- [4] Geoghegan, P. (2017). Brexit means Brexit – But what does Brexit mean? *Political Insight*.
- [5] Germain, R. (2014). The Political Economy of Global Transformation: Susan Strange, E.H. Carr and the Dynamics of Structural Change, <https://www.princeton.edu/~pcglobal/conferences/strange14/germain.pdf>.
- [6] Gifford, Ch. (2016). The United Kingdom's Eurosceptic political economy. *BJPIR*, Vol. 18 (4), pp. 779-794.
- [7] Kučerová, I. (2015). *Střední Evropa. Komparace středoevropských států*. Praha: Karolinum.
- [8] Parker, O. (2017). Critical political economy, free movement and Brexit: Beyond the progressive's dilemma. *BJPIR*, Vol. 19 (3), pp. 479-496.
- [9] Phinnemore, D. (2016). On the road to Brexit. *Political Insight*, Vol. 7 (3).
- [10] Smith, A. (2017). *Bohatství národů*, Praha: Grada.
- [11] Strange, S. (1988). *States and Markets*. London: Pinter.
- [12] Talani, L. S. (2014). *European political economy*. Ashgate Publishing Limited.
- [13] Thompson, H. (2017). Inevitability and contingency: The political economy of Brexit, *BJPIR*, Vol. 19 (3), pp. 434-449.

## Selected Challenges for the Common Agricultural Policy after 2020

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### **Abstract**

*Brexit and new European Union (EU) priorities (e.g. defense policy, climate change) can reduce EU funds by up to €25 billion a year. This depletion may result from a separate budget line for the Eurozone and the future enlargement of EU. As a result, the next budgets of the Common Agricultural Policy (CAP) and cohesion policy may be significantly reduced. The aim of this paper is to identify and discuss selected challenges for the CAP after 2020, both from EU and Polish agriculture. Our eclectic approach is based on methodology for public sector economics, economic analysis of law (EU legal documents). In order to defend the CAP budget rationally, beneficiaries have to find convincing arguments: first, the CAP multiplies European Added Value (EAV). The second one refers to the issues of decentralization and smart coordination of the implementation of the modified CAP. Finally, the third line of defense of the CAP budget relates to the growing riskiness of EU agriculture.*

**Keywords:** CAP budget, Common Agricultural Policy, European Value Added

**JEL Classification:** H25, Q14, Q18

### **1. Introduction**

The Common Agricultural Policy (CAP) as the agricultural policy of European Union (EU) has significantly evolved from its roots created by the Treaty of Rome in 1957. A general trend can be described as a shift from a production-oriented policy to focus on supporting so-called “safety net mechanisms” (inter alia, income support for farmers), “the integration of environmental requirements”, i.e. incentives for the production of public goods (given the sustainability paradigm). It should be underlined that “reinforced support for rural development” has a great environmental and societal importance for rural inhabitants of EU Member States (MS) (European Commission, 2013).

In contrast to national budgets EU budget is oriented to strategic goals that should be in line with Multiannual Financial Framework that provides a longer-term planning horizon and the stability that is needed for investment planning (European Commission, 2018). Brexit and new EU priorities (e.g. defence policy, climate change) can reduce EU funds by up to €25 billion a year (Strupczewski and de Carbonel, 2018). This depletion may result from a separate budget line for the Eurozone and the future enlargement of UE. As a consequence, the next CAP budget and cohesion policy may be significantly reduced. There is a plethora of arguments for the CAP budget, including environmental (Coderoni and Esposti, 2018), political (Di Pascuale et al., 2018) and social issues (Koester and Loy, 2016; Dumitru et al., 2017).

The aim of this paper is to identify and discuss selected challenges for the CAP after 2020, both from EU and Polish agriculture. We employ an eclectic methodological approach. Our theoretical descriptive analyses are based on methodologies for public finance, economics of public sector and economic analysis of law (mainly EU legal documents).

The remainder of this article is as follows. First, we refer to the paradigm of economic value added as an important justification for the CAP budget 2020+. Then, we identify societal and environmental challenges for CAP after 2020, including the issue of decentralization and smart coordination. Finally, we focus on a growing riskiness of EU agriculture as a very significant challenge for new CAP budget. Our article concludes with recommendations.

## 2. European Value Added vs. the CAP Budget

The concept of The European Added Value (EAV) may be treated as additional to the value created by actions of individual EU countries (Gorzalak et al., 2017, p. 4). A relatively high added value created by the EU expenditures is one of key justification for CAP budget (Ferrer and Kaditi, 2008). Nevertheless, the concept of EAV is described as complex. As a result, there are many problems related to a transparent quantification (Molino and Zuleeg, 2011). Figueira (2009) enumerated twelve criteria in four segments ('public sector economics', 'political criteria', 'legal rules', 'fiscal federalism', including subsidiarity and proportionality) that may be used for *ex-ante* analysis for involvement of EU Member States (MS). Vullings et al. (2014) indicated that implementation of societal objectives of EU MS citizen may be regarded as a important dimension of EAV. This may refer to agricultural and rural policy measures of EU. As Matthews convincingly stated, "agricultural conditions within integrating region are likely to be very different, in terms of crop specialisation, land quality, and topography, farm structure, farm income and market orientation (Matthews, 2014, p. 11). As a result, CAP has launched a bundle of flexibility tools in order to 'address specific issues in member states'.

As shown in Table 1, due to the lack of a commonly accepted methodology for estimating EAV, most arguments are presented as qualitative analysis of mechanisms and impacts of individual components on the situation of net contributors to the EU budget.

**Table 1: Components of European Value Added of the CAP from the Polish Perspective**

	<b>Description</b>
<b>Food security</b>	<ul style="list-style-type: none"> <li>a. A potential for increase in production of agricultural commodities and food</li> <li>b. Improving a Polish rank - Global Food Security Index.</li> </ul>
<b>Food safety</b>	Consumers (in the EU-15) of food products from Poland, particularly those with lower incomes, can maintain their living standard.
<b>Multiplier effects</b>	Polish farmers and rural residents, who benefit from support received from net payers to the EU budget, generate demand for foreign investment and consumption. As a result, this stabilises their economic situation.
<b>Providing environmental public goods and reduction of external costs</b>	<ul style="list-style-type: none"> <li>a. Net support for Polish agriculture externally positively influences the situation even in the border zone with Germany.</li> <li>b. Lower pollution of surface waters coming from Polish agriculture affects to some extent the quality of water flowing through the Odra and Nysa Łużycka, as well as the Vistula.</li> <li>c. Environmental well-being as well as the relatively high biodiversity of the rural landscape in Poland.</li> </ul>
<b>Territorial , spatial and social cohesion and labour mobility</b>	<ul style="list-style-type: none"> <li>a. Improvement of technical-production and economic infrastructure in the Polish rural increases its attractiveness for foreign direct investors, who can still benefit from lower wages. To some extent, it positively affects financial capital.</li> <li>b. Transport and logistics costs are decreasing, which gives a impulse for greater efficiency of the EU Single Market.</li> <li>c. Social cohesion strengthens EU's integrity and the acceptance of Community citizens for its reform, prevents uncontrolled depopulation of Polish rural areas and permanent migration from them, also to net payer countries. Workforce from Polish rural areas with better qualifications, cultural and intellectual capital as well as psycho-physical condition positively contributes to the socio-economic development of EU MS.</li> </ul>

Source: authors' elaboration

### 3. Modern CAP after 2020 vs. Decentralization and Smart Coordination

CAP is one of the oldest and most often reformed of the EU policies. Its objectives are stipulated in the Treaty on the Functioning of the European Union (TFEU) and include, inter alia, increasing agricultural productivity and ensuring a far standard of living for farmers. Yet, at the same time the EU priorities concerning the overall development of the EU are also part of the objectives of the consecutive CAP reforms.

The coming CAP reform is especially difficult as the Brexit most probably results in a lower budgetary allocation for the CAP as well as for the other EU policies. Also the European Commission in its scenarios for the EU finance after 2020 considers higher CAP spending only in one of the five scenarios it prepared (Table 2).

**Table 2: European Commission's Scenarios of the EU Budget after 2020 and their Impact on the CAP**

	<b>General trend and volume</b>	<b>CAP</b>
<b>Scenario 1. Carrying on</b>	Broadly stable Reflects current reform agenda of EU27 Lower relative shares of Cohesion and Agriculture to finance new priorities Higher use of financial instruments and guarantees	Better targeted support for farmers under special constraints (e.g. small farms, mountainous areas and sparsely populated regions) and risk management tools for all farms Investment in rural development (particularly agri-environmental measures)
<b>Scenario 2. Doing less together</b>	Significantly reduced Focus on internal market functioning Amounts for Cohesion and Agriculture significantly reduced Much higher use of financial instruments and guarantees	Support only for farmers under special constraints (e.g. small farms, mountainous areas and sparsely populated regions) Risk management tools for all farms
<b>Scenario 3. Those who want more do more</b>	Broadly stable with a potential increase to cover the areas of joint action Higher use of financial instruments and guarantees	As in Scenario 1
<b>Scenario 4. Radical redesign</b>	Lower Share of Cohesion and Common Agricultural Policy reduced Focus on priorities with very high EU value added Much higher use of financial instruments and guarantees	Reduced direct payments Focus on farmers under special constraints (e.g. small farms, mountainous areas and sparsely populated regions) Agri-environment-climate actions and risk management tools for all farms
<b>Scenario 5. Doing much more together</b>	Significantly increased Significant additional financing of new priorities and external action Higher use of financial instruments and guarantees Increase of own resources ceiling	Higher amount

Source: authors' elaboration based on European Commission (2017b).

As in the previous CAP reform the key issue of the current debate on the CAP is increasing its efficiency. Therefore, according to the EC's communication the CAP must increase the EU added value (European Commission, 2017a). Moreover, it is to support EU priorities such as: growth, jobs, circular economy and digital economy. An important element of the planned



reform is addressing environmental aspects of agricultural activity. The EC named following objectives of the future CAP:

- a. fostering a smart and resilient agricultural sector;
- b. bolstering environmental care and climate action and to contribute to the environmental and climate objectives of the EU;
- c. strengthening the socio-economic fabric of rural areas.

An important role is to be played by research and innovation in order to achieve greater efficiency in the use of natural resources in the agriculture. The EC emphasizes the need to enhance the links between research and agricultural activity to reduce negative impact of farming on the environment, reduce costs and ensure resilience to climate changes.

The role of direct payments, the key instrument of the CAP, is to remain unchanged as they are vital in providing income safety net for farmers. Yet, in order to increase their efficiency it is proposed to make greater use of such mechanisms as compulsory capping of the amount of direct payments received by a farmer, introducing degressive and redistributive payments as well as better targeting direct payments so that they are received only by “genuine farmers”.

To bolster CAP’s environmental care granting of direct payments is to be conditioned to undertaking environmental practices. This means that the so-called greening of direct payments will be continued. Yet, the practices will be defined by member states to take account of specific conditions.

It can be stated that the EC’s communication correctly identified the challenges facing the EU agriculture, however it is not clear that the instruments of the renewed CAP will be effective and efficient as it depends on the details of their design and implementation.

A ‘new delivery model’ of CAP places emphasis on greater subsidiarity. The EC also proposed a new delivery model of the CAP (European Commission, 2017). It is based on a CAP strategic plan that cover the instruments of both CAP pillars. In this new model member states would bear more responsibility for meeting the CAP objectives. The policy will be more result-driven and member states will pursue targets agreed with the EC. This is important from a regional perspective (see: Melecký and Staníčková, 2014).

With the current debate on the CAP reform the problem of the policy’s renationalisation has been evoked. It should be added that Oates (1999) who described and discussed the concept of fiscal federalism convincingly stated that “decentralized levels of government have their *raison d’être* in the provision of goods and services whose consumption is limited to their own jurisdictions” (Oates, 1999, p. 21). Moreover, he referred ‘fiscal federalism’ to the concept of ‘principle of subsidiarity’ that is used by EU regulations. The fear that the increase in the responsibility born by member states will result in the renationalisation of the CAP is expressed by many countries, for example France (Barbière, 2017) and Visegrad countries (Joint Declaration of the Ministers of Agriculture of the Visegrad Group (Czech Republic, Hungary, Poland, Slovakia) and Croatia on the Commission Communication on The Future of Food and Farming). It is already possible to add additional national support to RDPs, but if the possibility is extended to direct payments this can result in different support level among member states which will make the fair competition on the common EU market impossible and thus the Treaty objectives of the CAP will not be realized.

Poland as one of EU MS has dealt with new EU challenges under the CAP, inter alia:

1. Sustainable agriculture and combating/adaptation to climate change.
2. Increase in high-quality employment and stimulation of growth and investment.
3. Economic, social and territorial cohesion.

4. Security and protection of EU citizens.
5. Alleviating globalization effects (including adaptation).

In Polish agriculture and rural areas various projects have been implemented for the few years, which are consistent with ideas of EC Communication devoted to the modern CAP after 2020. Providing adequate funds in the next CAP budget will create real conditions to strengthen aforesaid actions. New initiatives will be an adequate response to the ever-changing global, European and national context for agriculture and rural policy.

#### **4. Growing Riskiness of EU Agriculture as an Important Challenge for CAP 2020+**

Developing a framework for risk management is important for EU agriculture after 2020. The EC emphasizes that the CAP instruments already offer a system of risk management, but sees room for improving it by reducing red tape of using indexes to calculate farm losses. The EC also proposes making greater use of financial instruments in the CAP. They are to be used also as a tool to overcome temporary cash flow shortages. The smart agricultural development in the context of risk management must not ignore the fact that the agricultural production is strictly dependent on the environmental, climatic and market conditions. The EU experts emphasise that the past of the agricultural production, like never before, increasingly dependent on climate change, which aggravate typical agricultural problems such as the strong dependence on weather conditions, price instability, natural disasters or exposure to new diseases. The uncertainty related to the weather, yields, prices, government policies, global markets and other factors affecting agriculture can result in large fluctuations of farm income (O'Donoghue et al., 2016).

The current CAP 2014-2020 notes the role of risk management in shifting, after 2020, to more sustainable agriculture, which, in addition to the environmental, economic and social aspects, guarantees also the provision of public goods. These objectives can be achieved by stabilising income provided by the tools of both the first (direct payments) and the second pillar of the CAP (insurance subsidies, mutual funds, income stabilisation funds). Direct payments are an income support instrument but are commonly considered also as an income stabilisation instrument. The above indicates that direct risk management instruments are found in the second pillar of the CAP and it is assumed that they will form the pillar for the development of farms of the future smart agricultural policy.

Thus, the challenge for the CAP 2020+ will be to strengthen the current risk management tools by improving their functioning. In this context, particular attention is paid to these aspects which may contribute to the smart, sustainable agricultural development such as:

- a. reduction in direct support for the benefit of the risk management development,
- b. reduction in administrative costs and formalities,
- c. support for private management strategies by strengthening farm advice,
- d. adjustment of risk management systems to individual sectors and regions,
- e. development of new financial instruments.

A review of the functioning of existing solutions in the EU countries under the second pillar shows that risk management systems in the EU are currently unused, in particular in terms of income stabilisation. While insurance covering natural risks is well developed in the Member States, mutual funds are practically non-existent (they are present in France, Italy, Hungary and Romania), and there is no clear willingness of the Member States to implement income stabilisation funds (they are present only in Hungary and Italy). Meanwhile, the role that risk management can play in the next perspective of the CAP can be evidenced by the solutions

applied in other countries. For example, the United States gave up direct support for the benefit of the development of risk management instruments (the scope of crop insurance has been extended by a new programme covering the so-called “shallow losses” and the so-called counter-cyclical payments have been introduced (Matthews, 2016). Therefore, in this area it will be necessary to reduce direct support to strengthen the second pillar tools. This need is to be indicated by the studies by Cordier (2015), which show that insurance (basic risk management tool) represents only 1% of the CAP expense structure, safety net activities – 39%, and income support activities as much as 60% of the CAP budget (Cordier, 2015). For comparison, in the United States, the structure of agricultural expenditure is as follows: 60% insurance and 40% safety net (Cordier, 2015). Reducing support in a form of direct payments can make farmers feel more likely to seek other forms of income protection, i.e. risk management.

Another challenge will be thus to reduce the administrative costs and formalities associated with the functioning of the risk management system. In this area, it is proposed to make better use of existing instruments by making them more attractive using e.g. simplified calculations of losses and cost refund options, and even transferring the funds from direct payments to the safety net, which farmers will be able to use in times of market imbalance (Agricultural Markets Task Force, 2016). It is also stressed that the risk management system cannot crowd out private market strategies based on countermeasures or market instruments. A particular problem may be ex-post activities, launched on an ad hoc basis, which limit proactive ex-ante approaches. This can be remedied by limiting ex-post activities to exceptional incidents (Meuwissen et al., 2001). Tangermann (2011) notes that the risk management system should complement existing instruments and methodologies (Tangermann, 2011). It would therefore be advisable to strengthen the transfer of knowledge between farmers and advisory bodies on the methods and way of risk mitigation which could be conveyed in a form of training, courses or workshops. In this area, it may also be necessary to construct a knowledge platform on risk management, which will provide farmers, public authorities and stakeholders with a forum to exchange experiences and best practices in risk management. This solution would significantly match the policy of the smart agricultural development. However, a problem may be the reluctance on the part of farmers to use these types of solutions.

Another challenge in the risk management area will be a need to take into account the diversity of farmers in the EU in terms of area size, cost structure, production or income. There is also a wide diversity of sectors and regions in terms of using market mechanisms. This heterogeneity impedes the design of a uniform risk management system at the EU level and requires a sectoral and territorial approach, as the risk and risk management strategies vary depending on the sector but also among regions. Therefore, the regionalisation of risk management and creation of a suitable framework for it at the sectoral or regional level will be the challenge. This will require access to statistical data which would enable a precise assessment of the risk scale and needs of the sector with regard to public support. On the one hand, the transfer of risk management tools from the EU level to the Member State level could jeopardise the single market (Mahé and Bureau, 2016) and, on the other, it can provide a better adjustment of instruments to the needs of family farms. Moreover, The challenge will also be to seek other financial instruments (loans, guarantees) best matched to the needs and possibilities of farmers that can help overcome temporary deficiencies in current funds as well as would facilitate access to financing for new forms of income protection for farmers. It is also postulated to introduce measures to complement the current set of risk management tools, such as support for reinsurance of mutual funds or various incentives to collect precautionary savings.

To conclude, the main objective of the smart EU risk management policy is to allow farmers to deal with risk so as to stabilise their income. The planned actions will help guarantee safety, reduce social and economic disparities within the agricultural sector of the EU countries, thereby contributing to the more complete sustainable development. The challenges thus faced by the CAP 2020+ as regards risk management will require a comprehensive approach and extensive actions at various levels of management.

## 5. Conclusion

Planning and implementation CAP budget are very important from the perspective of development of EU agriculture. A plethora of strongly developed arguments for supporting the agricultural sectors and rural areas in EU countries refers to environmental, social or political issues. They are based on the concept of the European Added Value. The Polish perspective takes into account especially the significance of food safety, food security and issues related to rural social capital.

Objectives of CAP after 2020, inter alia fostering a smart and resilient agricultural sector; underlining emphasis environmental care and climate action, strengthening the socio-economic fabric of rural areas, will require a different approach to the support system. A 'new delivery model' of CAP that is strongly related to greater subsidiarity is being discussed. In this context, there is room for debate over the problem of the policy's renationalization. It is expected that the new CAP will be more result-driven and EU MS will pursue targets agreed with the EC. This may result in a need for adaptation selected concepts from strategic management to smart and flexible controlling of EU spendings at different decision levels.

Growing riskiness of agriculture as one of major challenges for CAP 2020+ will involve not only actions at the national, regional level (which should relate to catastrophic risk), but above all efficient management of the farm by farmers themselves (in the case of ordinary risk) or the inclusion of financial institutions in the risk management system. Implementing modern risk management tools may significantly development of smart farming in EU countries.

## References

- [1] Agricultural Markets Task Force (2016). *Improving market outcomes – Enhancing the position of farmers in the supply chain*, Brussels, November 2016. [online]. [cit.2018-02-01]. Available at: [https://ec.europa.eu/agriculture/sites/agriculture/files/agri-markets-task-force/improving-markets-outcomes\\_en.pdf](https://ec.europa.eu/agriculture/sites/agriculture/files/agri-markets-task-force/improving-markets-outcomes_en.pdf)
- [2] Barbière, C. (2017). *France worries over renationalisation of Common Agricultural Policy*. [online]. [cit.2018-02-01]. Available at: <https://www.euractiv.com/section/agriculture-food/news/france-worries-over-renationalisation-of-common-agricultural-policy/>
- [3] Coderoni, S. and Esposti, R. (2018). CAP payments and agricultural GHG emissions in Italy. A farm-level assessment. *Science of the Total Environment*, 627, pp. 427-433.
- [4] Cordier, J. (2015). *Comparative Analysis of Risk Management Tools Supported by the 2014 Farm Bill and the CAP 2014-2020*, European Parliament, Brussels.
- [5] Di Pasquale, J., Camanzi, L., Dona Mihai, R., Capitano, F. and Adinolfi, F. (2017). *The Common Agricultural Policy reform, 2014-2020: An assessment of the influence*

- exerted by the institutional actors in the European decision-making process.* New Medit, 16 (1), pp. 43-49.
- [6] Dumitru, E.A.; Tudor, V.C.; Micu, A.R and Micu M.M. (2017). Analysis regarding the direct payments in the European Union, In *Scientific Papers-Series Management Economic Engineering In Agriculture and Rural Development*, vol. 17, iss. 4, pp. 113-116.
- [7] European Commission (2013). Overview of CAP Reform 2014-2020, Agricultural Policy Perspectives Brief N°5\* / December 2013.
- [8] European Commission (2017a). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. The Future of Food and Farming. COM(2017)713.* Brussels: Publications Office of the European Union.
- [9] European Commission (2017b). *Reflection paper on the future of EU finances.* Brussels: Publications Office of the European Union.
- [10] European Commission (2018). *Communication From The Commission, A new, modern Multiannual Financial Framework for a European Union that delivers efficiently on its priorities post-2020*, Brussels, 14.2.2018, COM(2018) 98 final.
- [11] Ferrer, J.N., Kaditi, E.A. (2008). The EU added value of agricultural expenditure – from market to multifunctionality – gathering criticism and success stories of the CAP. Report prepared by the Centre for European Policy Studies (CEPS) for the European Parliament.
- [12] Gorzelak, A., Herda-Kopańska, J., Kulawik, J., Soliwoda, M. and Wieliczko, B. (2017). Controversies over the European Value Added created By CAP. *Problems of Agricultural Economics*, 350(1), pp.3-28.
- [13] Joint Declaration of the Ministers of Agriculture of the Visegrad Group (Czech Republic, Hungary, Poland, Slovakia) and Croatia on the Commission Communication on The Future of Food and Farming. Text available at: <http://www.visegradgroup.eu/calendar/2018/joint-declaration-of-the> .
- [14] Koester, U., and Loy, J.-P. (2016). EU agricultural policy reform: Evaluating the EU's new methodology for direct payments. *Intereconomics*, 51 (5), pp. 278-285.
- [15] Mahé, L.-P. and Bureau, J.-C. (2016). *Research for AGRI Committee. The future of market measures and risk management schemes.* European Parliament Study IP/B/AGRI/IC/2015-194.
- [16] Matthews, A. (2014). Europe's experience with agricultural integration and lessons with third countries. In: Schmid, E., Vogel, S. (eds.), *The Common Agricultural Policy in the 21st Century*. Wien: facultas.wuv, Wien, pp. 1-18.
- [17] Matthews, A. (2016). *The US farm safety net*. [online]. [cit.2018-02-21]. Available at: <http://capreform.eu/the-us-farm-safety-net/>
- [18] Melecký, L. and Staničková, M. (2014). Regional Efficiency Evaluation by DEA Approach: Comparison of Selected EU15 and EU13 Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 465–475.

- [19] Meuwissen, M.P.M., Hardaker, J.B., Huirne, R.B.M. and Dijkhuizen, A.A. (2001). Sharing risks in agriculture, principles and empirical results. *Netherlands Journal of Agricultural Science*, 49, pp. 343-356.
- [20] Molino, E. and Zuleeg, F. (2011). The EU Added Value Test to Justify EU spending: What Impact for Regions and Local Authorities? European Policy Centre.
- [21] O'Donoghue, E.J., Hungerford, A., Cooper J.C., Worth T., and Ash M. (2016), *The 2014 Farm Act Agriculture Risk Coverage, Price Loss Coverage, and Supplemental Coverage Option Programs' Effects on Crop Revenue*. ERR-204, USDA, Economic Research Service, January [online]. [cit.2018-02-01]. Available at: <https://www.ers.usda.gov/authors/ers-staff-directory/erik-odonoghue/>.
- [22] Oates, W.E. (1999). An Essay on Fiscal Federalism. *Journal of Economic Literature*, Vol. 37, No. 3 (Sep., 1999), pp. 1120-1149.
- [23] Strupczewski, J. and de Carbonnel, A. (2018). *EU executive presents options for next budget, seeks to make up for Brexit loss*. BUSINESS NEWS, FEBRUARY 14, 2018 [online]. [cit.2018-02-01]. Available at: <https://uk.reuters.com/article/uk-eurozone-budget-commission/eu-executive-presents-options-for-next-budget-seeks-to-make-up-for-brexit-loss-idUKKCN1FY1U4>
- [24] Tangermann, S. (2011). *Risk Management in Agriculture and the Future of the EU's Common Agricultural Policy*. ICTSD Programme on Agricultural Trade and Sustainable Development; Issue Paper No. 34; ICTSD International Centre for Trade and Sustainable Development, Geneva, Switzerland. [www.ictsd.org](http://www.ictsd.org)
- [25] Vullings, W. et al. (2014). *European Added Value of EU Science, Technology and Innovation actions and EU-Member State Partnership in international cooperation*. European Commission, Directorate-General for Research and Innovation, International Cooperation, Main Report. Publications Office of the European Union, Luxembourg. 2014.

## Intangible Assets and Goodwill Valuation in the European Union

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### Abstract

*European valuation standards TEGoVA have conception for valuation of intangible assets and they formed in order to be conform to International valuation standards IVS also in order to reach worldwide consensus in best practices in valuation process. The process of valuation of intangible influences was also surveyed in China, Hong Kong, USA, Canada, Japan, Germany, UK, Poland, Russia and overall in the Europe. Situation in mentioned locations is similar, valuation of intangible influences has not been determined by a concrete list of items and there has not been established concrete clear process. The subject matter of this thesis is a proposal for a method of valuation of intangible effects that will impact assets prices. It deals with proposed procedures for valuation of intangible assets, and definitions of such property. Special effects are in particular name, historical value, design, quality of layout, security aspects, accessibility, conflict groups of inhabitants in or near the property, location, provenience and other.*

**Keywords:** European integration, goodwill, intangible assets, market value, tangible assets

**JEL Classification:** M21, M29, M31

### 1. Introduction

Valuation of intangible assets in the European Union include certain specifics compared to cost assets (Brachmann 1993, Eurostat 1998-2016). The specifics should be considered in the methodology and in final price (Seabrooke, Kent, Hwee 2004). There exists a basic consensus in the way of tangible assets evaluation, in the case of intangible assets there is not. Aim is to introduce the scientific public with a different view on the essence of valuation (Shetty 1995). New software is designed for asset valuation using the methods of cost, yield and comparative value with the special feature that allows the division of assets, including real estate on tangible and intangible parts. The software calculates enter information separately goodwill or badwill (Kulil 2015).

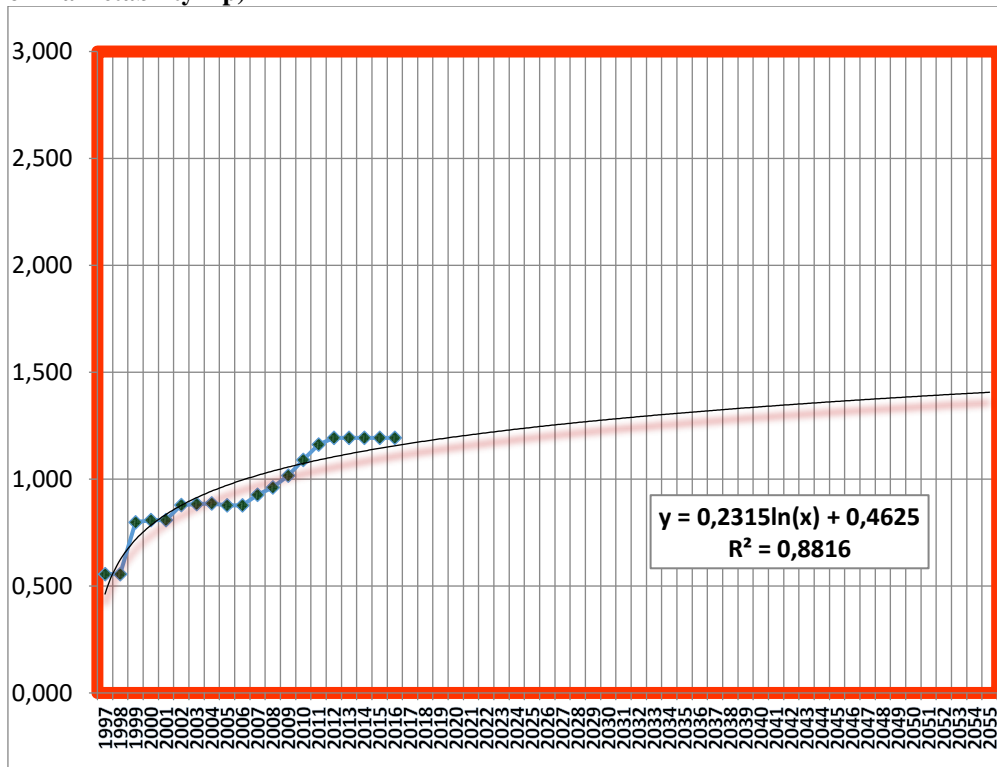
### 2. Problem Formulation and Methodology

Goodwill is in the European Union an economic term denoting the difference between the market value of the company and sub-stance price, less any liabilities. Indicates a value, intangible assets such as customer relationships, reputation (Horne 1989). Reflects market position, quality and especially tradition. Goodwill can distinguish two ways, on the goodwill of the original and secondary. Initial goodwill to create their own company's business activities, but not in the accounts of a company recognized because it is not reliably measurable (ČSÚ Praha 1993-2016). Secondary acquires goodwill on the acquisition of another company. Badwill is negative goodwill.

### 2.1 Model and Data

Software can use appraisers and forensic experts in the field of economics, valuation, which the program will be free to download. The software is available on the website of the Institute of Electronic Appraisal of the Faculty of Economics at the Technical University of Ostrava, <http://www.ekf.vsb.cz/k166/cs/> (Kulil 2015). See Figure 1 for details.

**Figure 1: Development of Marketability in Period 1997 – 2016 (Example of Coefficients of Marketability Kp)**



Source: marketability coefficients according to records of the Ministry of Finance of the Czech Republics

Here we see the automatically generated price perspective of the asset for the future at annual intervals up to 2055, when the market value of this example is estimated at the selling rate (coefficient of marketability) of 1.40 against the cost-determined price – price of substance.

### 3. Problem Solution

Following procedure for valuation of goodwill and badwill type of assets of enterprises resulting from mentioned model approaches appears as the most objective. Enterprise assets will be evaluated by comparative, yield and cost method. The price will be adjusted in each used method according to an influence of special effects, which means good or bad reputation and according to other special effects which influence usual market price. Other evaluated intangible assets of an enterprise (except goodwill) are included in the price if they really exist.



### 3.1 The Cost Value of Estate Valuation in the European Union

In order to calculate the current value of listed historical buildings the author recommends to count significantly higher lifespan than in the case of unprotected buildings. Other proposed life span would probably not normally be less than the age of the main volumes of construction.

- The cost of major structures - indicating processor (price regulation, budget, historic price index and other).
- Cost value of other buildings, technologies and landscaping - will insert.
- The cost of permanent growth - indicating processor.
- The price of land price map or a comparison of average quality - indicating processor.
- Current price structures in total will be calculated automatically.
- Cost value of land and vegetation in total will be calculated automatically.
- Coefficient of marketability  $K_p$  (KP) state statistical processor based on the price determined by the current price regulation or like estimate. For detail also see table no. 1
- Graf history years 1997 - 2016 and give the processor price by historical data or according to valuator data estimate. For subsequent years, according to statistical data indicate ČSÚ, Eurostat, US data.
- The development trend for the next 40 years the program generates automatically based on the logarithmic regression curve. See Figure 1 for details.

**Table 1: List of Groups and Items of Special Intangible Effects**

<i>Nr.</i>	<i>Intangible pricing influences by modifying <math>K_p</math> per item with detailed list itemization</i>	<i>Recommended range %</i>
1.	Location favorableness in the locality compared to the average of the locality	From -10 % to +10 %
2.	Estate name, prestigiosness, dominance	From -10 % to +10 %
3.	Historical value, cost of preservation of monuments	From -10 % to +10 %
4.	Architectonic rendering, the quality of disposition, view	From -10 % to +10 %
5.	Safety, users' privacy, conflict inhabitants in the surroundings	From -70 % to +10 %
6.	Danger of floods, landslides, damage from transport, bad smells, air pollution	From -10 % to +10 %
7.	Dangerous disposition and harmful material, radon	From -10 % to 0 %
8.	Transport accessibility with respect to the average standard in the surroundings	From -10 % to +10 %
9.	Impact of terraced housing, a building inside a row or at its end	From -10 % to 0 %
10.	Pricing perspective of estate and other influences	From -70 % to +10 %

Source: author's calculations

The processor in the European Union will complement estimation of the percentage, and only if different from the current market situation. Span adjustment is recommended. Total intangible special effects with real estate above the threshold [%] are calculated automatically, including cost price, including land and vegetation to intangible property (Kulil 2014).

### **3.2 Yield Valuation**

Long historical period of market economy showed that the property purchase in order to ensure a reasonable profit (under the condition of proper management) is worth. This means that the yield value should theoretically be in the performing companies and real estate standardly higher than the cost price (after redundant assets deduction). In practice, cost value is often higher, because there is usually a large surplus of production resources and real estate, they are in an inefficient structure and there may be a negative intangibles (badwill).

- Option is set to eternal annuity; the process can be changed for different ways of calculating the yield value.
- Complete up net annual revenue of buildings, including land and forests, assets.
- The rate of capitalization for standard conventional property - indicate the processor.
- The rate for capitalization of intangible property, including the effects will be calculated automatically as a deduction from recalculation or capitalization rates mentioned in the previous item by the coefficient sales centesimal degree - as an expression of risk premiums or deductions.
- Yield value:  $\text{Net income} / \text{capitalization rate} [\%]$  - calculates automatically.

### **3.3 Comparative Valuation**

The comparative value should be determined as the median of Gaussian curve of statistical evaluation of individual prices which are compared. For the calculation of the comparative value it is necessary to consider the fact that every property is different, there are always differences and exactly the same comparative representatives cannot be found. Therefore, the comparative value is only one of the several methods - the pillars for the determination of market prices.

- Comparison value separately calculates and give the property a normal average numerical value.
- Comparison value, including intangible effects of excess is calculated automatically by the coefficient of marketability of the cost method.

### **3.4 The Market Value of Property**

In the European Union is calculated automatically as the weighted average cost, revenue, and by comparison, the ratio in the formula determines the processor. It can be added to the formula, the value of 0.0 to reset some of the methods of valuation. Since the market price should be deducted from the value of easements.

### **3.5 Price of Goodwill**

Goodwill or badwill as a summary of specific intangible impacts on the market price is calculated as the difference between the market value of the property and its cost price. This rule applies generally to movable property, immovable property and businesses. Plots of land

price is represented by all rights related to human activities on a land including construction and construction rights. Plot of land is to full extend intangible asset only of goodwill type.

- Coefficient of intangible assets ( $KP$ ) is the share price of market value and the prices of cost value.
- When the value  $KP$  is greater than 1.00 with, a total is goodwill.
- At values less than 1.00  $KP$ , a total is badwill.
- Estimated price perspective - complete processor awards: stagnation (moderate or fast) decline, growth.

#### 4. New Findings and Special Influences Valuation

Following procedure for valuation of goodwill and badwill type of assets of enterprises resulting from mentioned model approaches appears as the most objective. The amount of goodwill ( $GW$ ) or badwill ( $BW$ ), is the difference market price ( $CO$ ) and cost price ( $CC$ ) as:

$$GW(BW) = CO - CC. \quad (1)$$

The market value  $CO$  is determined by multiplying the cost value  $CC$  (replacement cost less depreciation, or material value) by marketability coefficient  $KP$  according to the relationship

$$CO = CC \times KP, \quad (2)$$

it follows that

$$KP = CO / CC. \quad (3)$$

The marketability coefficient is defined as the ratio between the average actual sales values achieved and the average cost prices of a comparable type of things at the particular time and location.

##### 4.1 Market Value $CO$

According to cost, yield and comparative valuation mentioned in previous parts there will be realized an appraisal of market value (International Valuation Standards Committee 2017, Czech Act on Property Valuation No. 151/1997 Coll.). The amount of price of special influences – goodwill and badwill – will be the difference between market value of property and cost price without  $KP$  (cost price  $CC$ ). Amount of harm in connection with the easement will be counted as standard yield method and subtracted from the market value of the property. The maximum discount is not determined. The net income may refer to an optimistic economic situation and the possibility of smooth application of the income valuation framework (Růžicková 2013).

##### 4.2 Coefficient of an Intangible Asset

We have the concept of marketability coefficient  $KP$  or  $Kp$ , in German-speaking countries a similar term market hopefulness is used (Ross, Brachmann, Holzner 1993). Its fundamental as an index for determining the degree of special influences - intangible assets ( $NM$ ) in a positive or negative amount towards the current price ( $CC$ ) and usual market price - value of assets ( $CO$ ) as a whole is not obvious.

$$CO = CC + NM. \quad (4)$$

Coefficient of an intangible asset ( $K_{NM}$ ) appears to be more accurate term. An intangible character of valued property results from the mentioned term. And it shall not be determined as the estimated generally not well understood constant, which an expert established. This coefficient can be expressed by the following formula:

For real estate

$$\text{KNM} = (\text{CC} + \text{NM}) / \text{CC}. \quad (5)$$

For movables

$$\text{KNM} = (\text{CC} + \text{NM}) / \text{CC}. \quad (6)$$

For enterprises from the material substance (*S*)

$$\text{KNM} = (\text{S} + \text{NM}) / \text{S}. \quad (7)$$

### 4.3 New Methodology

Separate system of valuation tangible and intangible assets for the European Union was worked out (European Valuation Standards 2016). For the field of special influences there were proposed and defined apposite terms goodwill and badwill for valuation analogically according to the terms used by economists and appraisal experts while appraising enterprises (Kulil 2015). Character and fundamental of marketability coefficients KP are clarified from the point of view of their relationship to tangible and intangible assets. Ten main areas and hundred items of intangible influences affecting estate price are complexly defined. The use of a unit of valuation capacity provides a signal of the quality of an asset (Fishman, Parker 2015).

Author created a software NEMO-RATUS 2017 for practical use in the European Union. Proposed procedures in the whole extend of valuation including table analysis of proposed special influences for estate with logarithmic regression and including intangible assets into cost, yield, comparative and market price are applied in the computer system.

Market price of property is automatically divided into tangible and intangible part. This is basic duality (Kumar 2018). For more details see <http://www.ekf.vsb.cz/k166/cs/>. Proposed procedures and detailed listing of special influences represent a comprehensive, practical and unequivocal support for the valuation practice of experts.

## 5. Conclusion

Aim of the paper was to work out a proposal for valuation of special influences in the European Union, that have an impact on estate price. Controllable procedures for the valuation of intangible assets were proposed. System of valuation with direct implementation in cost, yield and comparative methods from which we can estimate the market value was proposed. In case of estate special influences are defined mostly as good or bad name of locality real estate, historical value, design, quality of layout, safety aspects, transport accessibility, conflict inhabitants in the surroundings, influence of terraced house, other influences and price perspective. Terms goodwill (GW) in case of positive impact and badwill (BW) in case of negative impact were defined for each surveyed special influence.

Proposed methodology negative is subjective approach of an expert while valuating intangible assets, each expert can work out valuation with a different result. It is not possible to avoid expert's personal view. Disproportion among individual experts valuating by market price will appear also in the future. These differences can only be reduced by accepting unified methodology such as proposed in this monograph.

Future research will therefore focus on the clarification of procedures and a detailed validation of recommended tariffs for fixed assets.

## References

- [1] Brachmann R. (1993), *Construction costs of industrial buildings, commercial factory price of Real Estate, insurance rates*. Praha, Czech Republic: *CONSULTINVEST*.
- [2] Horne V. J. (1989), *Financial Management and Policy*. New Jersey, USA: *Englewood Cliffs*.
- [3] Kulil V. (2014), *Goodwill and Valuation*. Brno, Czech Republic: *AN CERM s.r.o.*
- [4] Kulil V. (2015), *Goodwill and Valuation*. Saarbrücken, Germany: *OmniScriptum GmbH & Co. KG*.
- [5] Ross-Brachmann-Holzner, (1993). *Detection of construction of the buildings and commercial Real Estate values*. Praha, Czech Republic: *CONSULTINVEST*.
- [6] Seabrooke W., Kent P., Hwee H. (2004), *International Real Estate an Institutional Approach*. UK, USA, Australia: *Blackwell Publishing Ltd*.
- [7] Shetty A. (1995), *Finance and Integrated Gglobal Approach*. USA: *Austen Press, Homewood*.
- [8] *EVS - European Valuation Standards, 8. Edition 2016*.
- [9] *IVS - International Valuation Standards Committee: International Valuation Standards, Edition 2017, IVSC, London, UK, 2017*.
- [10] *Czech Act on Property Valuation No. 151/1997 Coll. with implementing decrees*.
- [11] ČSÚ (1993-2016). *Statistics* [online]. [cit.2016-01-02]. Available at: <https://www.czso.cz/csu/czso/domov>.
- [12] EUROSTAT (1998-2016). *Statistics* [online]. [cit.2016-01-02]. Available at: <http://ec.europa.eu/eurostat>.
- [13] Kulil V. (2015), *Software for goodwill valuation VALUE-RATUS* [online]. [cit.2018-02-20]. Available at: <http://www.ekf.vsb.cz/k166/cs/>.
- [14] Kumar V. (2018), *A Theory of Customer Valuation: Concepts, Metrics, Strategy and Implementation*. *Journal of Marketing* Vol. 82 (January 2018), 1-19.
- [15] Fishman M. J., Parker J. A. (2015), *Valuation, Adverse Selection, and Market Collapses*. Oxford University Press on behalf of The Society for Financial Studies, *Advance Access publication* April 9, 2015.
- [16] Růžičková K. *Application of income valuation methods: Value spread vs. net income* (2013) *ER-CEREI*, Volume 16: 239–244 (2013).

## **A Critical Perspective on the Development of Internet Related Case Law for Online Consumer Contracts in the EU**

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### **Abstract**

*In this paper, I will critically assess the work of the Court of Justice of the EU in its important role as a sole authority on the interpretation of the EU law. The substance of the paper deals with the case law concerning jurisdictional rules contained in the Brussels Ibis Regulation for disputes arising out of consumer contracts concluded online. For the development of the internal market and economic integration of the EU, it is essential to safeguard rights of weaker parties (consumers) in small-amount, cross-border, everyday transactions. The interpretation is crucial for terms “consumer”, “consumer contract” and “directing of activities”. The Court of Justice had opportunities to be innovative in this regard and to create a new jurisprudence for the online environment. My research question in this paper is whether the Court went too far and effectively diminished the legal certainty and predictability for application of relevant jurisdictional rules for disputes arising out of consumer contracts in the Brussels Ibis Regulation.*

**Keywords:** Court of Justice of the EU, directing of activities, internet, online consumer contracts

**JEL Classification:** K12, K15, K41

### **1. Introduction**

Because of the economic integration and globalization, the world is interconnected. It is a reality of our everyday life to live our lives on the internet. We share our lives on online social platforms and engage in commercial transactions online (Kyselovská, 2014a, p. 22). Due to ubiquitous character of online activity, it is relatively easy to conclude a contract with international element (Kyselovská, 2017, p. 78). Many of online transactions are concluded to satisfy one's personal needs. Therefore, they can be qualified as consumer contracts. For effective functioning of the internal market and consumer behavior in the European context, it is necessary to ensure consumer's rights and access to effective justice. In cases of contractual disputes arising out of small-amount, cross-border, everyday transactions, the consumer is more vulnerable. Online activities and information are globally assessable; it may be difficult to delimit access to online offers (Maunsbach, 2017, p. 83). However, there are still some mandatory requirements regarding information that must be provided in the case of goods and services offered online.

Jurisdictional rules for disputes arising out of consumer contracts with cross-border element are regulated in the Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 17 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (hereinafter referred to as Brussels Ibis Regulation)

(Drličková, 2014; Kyselovská, 2014). The substance of the paper deals with the case law of the Court of Justice of the European Union (hereinafter referred to as Court of Justice) concerning jurisdiction in online consumer contracts rules and its critical analysis.

## 2. Problem Formulation and Methodology

The jurisdictional rules for disputes arising out of the consumer contracts are contained in Articles 17, 18 and 19 of the Brussels Ibis Regulation. For the correct and proper application of these rules, it is necessary to interpret, *inter alia*, terms “consumer”, “consumer contract” and “directing of activities”. All these terms must be interpreted autonomously.

For the concept of “consumer”, it is necessary to establish interpretation that will not be too wide, nor too narrow. The EU law protects not only a “passive” consumer, but also an “active” consumer. In this paper, I will analyze a Court of Justice’s jurisprudence regarding the scope of the protection and the problem when a consumer is “too well informed” and *de facto* a professional in his field. For the “directing of activities”, it is crucial to establish the scope and conditions to determine whether a foreign professional is via his website targeting, i.e. directing his activities, to consumers in other states. The problem with the determination is that in the online, fast changing and developing environment, the presumptions and technological standards may change very quickly, thus the law is one step behind.

The sole interpreter of the EU law is the Court of Justice of the European Union. The Court had opportunities to be innovative in this regard and to create a new jurisprudence for the online environment; online consumer contracts in particular.

Therefore, my research question in this paper is *whether the Court went too far and effectively diminished the legal certainty and predictability for application of relevant jurisdictional rules for disputes arising out of consumer contracts in the Brussels Ibis Regulation.*

Methodology in this paper is based on analysis (of relevant legal rules and case law) and synthesis of acquired information. From the analysis of individual cases, I will induce general observations and conclusions.

## 3. Problem Analysis and Solution

In this part, I will analyze case law of the Court of Justice of the EU concerning interpretation of terms “consumer” and “consumer contracts” (sub-chapter 3.1) and “directing of activities” (sub-chapter 3.2).

### 3.1 Consumer and Consumer Contract under the Brussels Ibis Regulation

Article 17 Para 1 Brussels Ibis Regulation contains personal and material scope of the special rules: “*In matters relating to a contract concluded by a person, the consumer, for a purpose which can be regarded as being outside his trade or profession, jurisdiction shall be determined by this Section [...].*” Recently, the Court of Justice had the opportunity to interpret the term “consumer” for persons active on social media platforms in judgment of the Court (Third Chamber) of 25 January 2018 Maximilian Schrems v Facebook Ireland Limited, Case C-498/16 (hereinafter referred to as C-498/16 Maximilian Schrems).

Mr. Schrems, an Austria citizen, has been litigating against Facebook since 2011, when he submitted complaints to the Irish Data Protection Commissioner. In his complaints, he contested the way in which Facebook uses personal data of its users. His following complaint

in 2013 led to the annulment of the “Safe Harbour” framework between the US and the EU (Polčák, Svantesson, 2017, pp. 212-213).

This case, C-498/16 Maximilian Schrems, is unrelated to the aforementioned proceedings. Mr. Schrems has used Facebook since 2008. In the beginning, he created a Facebook account under false name only for his personal use. However, during his time on Facebook, Mr. Schrems built a reputation as a privacy activist, published two books, gave lectures and founded a non-profit organization that uses court litigation to enforce privacy and data protection laws in the European Union. In 2011, Mr. Schrems created a Facebook page to inform about his activities.

In 2014, Mr. Schrems decided to bring a “class action” against Facebook for violations of privacy and data protection laws. Around 25.000 Facebook users from all over the world assigned their claims to him. Nevertheless, only eight claims including Mr. Schrems’s Facebook account and Facebook page formed the object of these proceedings. The seven claims were from Facebook users from Austria, other EU Member States and India. Mr. Schrems brought his claim to the courts of his domicile in Vienna, Austria. Mr. Schrems argued, that as consumer, he can rely on provisions for special jurisdiction in Article 18 Para 1 Brussels Ibis Regulation: “A consumer may bring proceedings against the other party to a contract either in the courts of the Member State in which that party is domiciled or, regardless of the domicile of the other party, in the courts for the place where the consumer is domiciled.”

The proceedings raised two preliminary questions, which were referred by the Austrian Oberster Gerichtshof to the Court of Justice. The first question asked, if Mr. Schrems could be considered a consumer in the sense of Article 17 Para 1 Brussels Ibis Regulation, despite his professional interest in the claims. In other words, whether a person can become a professional litigant in consumer matters and still be in a need of special consumer protection. The second preliminary question concerned international jurisdiction for disputes arising out of consumer contract where claims have been assigned. In other words, whether Mr. Schrems can rely on the special protective provisions in Article 18 Para 1 Brussels Ibis Regulation regarding claims that have been assigned to him by other consumers domiciled in the same Member State, another Member States and a non-member State.

The Court of Justice answered the first preliminary question in positive, adopting quite flexible and nuanced approach to the issue. The Court of Justice followed the Advocate General’s Opinion and previous case law. The assessment of whether a person is a “consumer” does not depend on their subjective qualities but on the position of the person in a particular contract (Kyselovská, 2014, pp. 274-277); such contract must have been concluded for purpose of satisfying an individual’s own needs and for private consumption (Kyselovská, 2014, pp. 274-277). A contract that has been concluded for a purpose that is partly private and partly professional, the professional part of it must be “so slight as to be marginal” for the contract to be considered to be consumer contract (Kyselovská, 2014, pp. 277-280).

For the first preliminary question, the Court of Justice was faced with two aspects of the “consumer” definition. Firstly, whether the status of consumer can change over time with regard to the same contractual relationship (**Opinion of Advocate General Bobek [online]**, § 7). Secondly, with the concept of consumer in the context of social media, because Facebook, in particular, presents great challenges to the traditional definition of a consumer (**Opinion of Advocate General Bobek [online]**, § 27). The Court of Justice decided that “a user of a [digital social media network like Facebook] may, in bringing an action, rely on his status as a consumer if the predominately non-professional use of those services, for which the applicant initially concluded a contract, has not subsequently become predominately professional” (C-498/16 Maximilian Schrems, § 38). The Court of Justice had than to decide whether this was case of Mr. Schrems, who initially entered into contract with Facebook for personal purposes,



but later developed a professional activity involving, inter alia, actions and lectures against Facebook. According to the Court of Justice, “neither the expertise which that person may acquire in the field covered by those services nor his assurances given for the purpose of representing the rights and interests of the users of those services can deprive him of the status of a “consumer” within the meaning of the Article [17 Para 1 Brussels Ibis Regulation]” (C-498/16 Maximilian Schrems, § 39). Interpretation to the contrary “would have the effect of preventing an effective defense of the rights that consumers enjoy in relation to their contractual partners who are traders or professional, including those rights which relate to the protection of their personal data” (C-498/16 Maximilian Schrems, § 40). The Court of Justice linked its interpretation to the objective of ensuring a high level of consumer protection in Article 169 of the Treaty of the EU (C-498/16 Maximilian Schrems, § 40).

For interpretation of “consumer” and “consumer contract”, the Court of Justice did not follow up on the distinction between Mr. Schrems private Facebook account and “profile” and his allegedly professional Facebook “page”, as Advocate General thoroughly distinguished in his Opinion (**Opinion of Advocate General Bobek [online]**, § 44-50). Therefore, the decision of the Court could be the same even if Mr. Schrems joined Facebook within the sole purpose of enforcing his claims. Although the interpretation of the Court of Justice is flexible, but still within the frame of consumer protection aims, it does not, in my opinion, cares to the problems created by the increasingly wide range one may enjoy using social media platforms. These issues remain, for the time being, without answer.

In addition, for the second preliminary question, international jurisdiction for assigned claims, the Court of Justice followed its established case law. The special jurisdictional rules apply only to consumer who is party to the consumer contract in question (Kyselovská, 2014, pp. 281-284; Kyselovská, 2014, pp. 143-145). The assignment of claims cannot, in itself, have an impact on the international jurisdiction under the Brussels Ibis Regulation (C-498/16 Maximilian Schrems, § 48). This interpretation could, however, exclude the consolidation of claims of other Austrian consumers in the same court. This stems from Article 18 Para 1 Brussels Ibis Regulation, which does contain rule of international jurisdiction and determines local jurisdiction. The Advocate General proposed, in this regard, that an additional forum in which consumer claims could be brought could be created under national law (**Opinion of Advocate General Bobek [online]**, § 117). Still, plaintiffs can use the jurisdictional rule in Article 18 Para 1 Brussels Ibis Regulation and bring all claims in the Member State of the defendant’s domicile, and the respective national procedural laws will decide on whether the claims can be consolidated.

In conclusion, the Court of Justice ruled that “activities of publishing books, lecturing, operating websites, fundraising and being assigned the claims of numerous consumers for the purpose of their enforcement do not entail the loss of a private Facebook account user’s status as a consumer within the meaning of [Article 17 Para 1 Brussels Ibis Regulation]” (C-498/16 Maximilian Schrems, § 41). Moreover, Article 18 Para 1 Brussels Ibis Regulation must be interpreted as meaning that “it does not apply to proceedings brought by a consumer for the purpose of asserting, in the courts of the place where he is domiciled, not only his own claims, but also claims assigned by other consumers domiciled in the same Member State, in other Member States or in non- member countries” (C-498/16 Maximilian Schrems, § 49).

### **3.2 Direction of Activities**

Article 17 Para 1 Brussels Ibis Regulation regulates jurisdiction for disputes arising out of three distinct types of consumer contracts: a) contract for the sale of goods on instalment credit terms; b) contract for a loan repayable by instalments or other type of credit for sale of goods;

and c) “other” contracts, if the professional directs his activities to the Member State of consumer’s domicile.

The condition based on “directing of activities” was introduced into the Brussels regime because of the growing number of online consumer contracts (Rožehnalová et.al., 2013, p. 265). In 2009, the Court of Justice delivered its landmark decision in *Peter Pammer v Reederei Karl Schlüter GmbH & Co. KG* (C-585/08) and *Hotel Alpenhof GesmbH v Oliver Heller* (C-144/09), joined cases C-585/08 and C-144/09 where the meaning of “directing of activities” was interpreted for the first time (hereinafter referred to as joined cases Pammer, Alpenhof).

This case dealt with two similar situations. In the C-585 Pammer case, an Austrian consumer argued jurisdiction in Austria in a dispute with a German professional that had allegedly directed its activities to Austria. In the C-144/09 Alpenhof case, a professional in Austria argued jurisdiction in Austria in dispute with a German consumer, who contested jurisdiction of Austria courts due to his position as consumer and the fact, that the Austrian professional directed its activities to Germany. Both cases dealt with the question how Article 17 Para 1 c) and the prerequisite “directing of activities” should be interpreted in relation to online activities (Kyselovská, 2017).

The Court of Justice stated that the mere accessibility of the professional’s website in the Member State of consumer’s domicile is not sufficient to establish “directing of activities” (joined cases Pammer, Alpenhof, § 94). The prerequisite is satisfied if it is apparent from the professional’s overall website activity; it is for the national courts to assess fulfilment of this condition (joined cases Pammer, Alpenhof, § 93). Moreover, the Court of Justice created a non-exhaustive list of criteria that may be evidence in support of a finding that a professional’s activity is directed to the Member State of consumer’s domicile. The list contains matters as evidence of prior international trade, use of language or currency, the use of country specific top-level domain, marketing activities etc. These criteria must be assessed in every case. From this list, the Court of Justice also differentiates “patent evidence” matters (Maunsbach, 2017, p. 83), such as if it is mentioned on the professional’s website that he is offering its goods or services to the Member State of the consumer or if the professional has had expenditure for marketing activities in such Member State (joined cases Pammer, Alpenhof, §§ 81-83).

In 2012, resp. 2013, the Court of Justice further specified the conditions for “directing of activities”. In judgment of the Court (Fourth Chamber) of 6 September 2012 *Daniela Mühlleitner v Ahmad Yusufi, Wadat Yusufi*, Case C-190/11 the Court decided, that Article 17 Para 1 Brussels Ibis Regulation does not require for the contract between consumer and the professional to be concluded at a distance. In judgment of the Court (Third Chamber) of 17 October 2013 *Lokman Emrek v Vlado Sabranovic*, Case C-218/12 the Court stated that the aforementioned provision does not even require the existence of a causal link between the means employed to direct the commercial activity to the Member State of consumer’s domicile. However, the existence of such of a causal link could constitute evidence of the connection between the contract and such activity. In other words, consumer can be more active and travel abroad, to another Member State, to conclude a consumer contract; it does have to be concluded from consumer’s home. Furthermore, the consumer could not even be aware that the foreign trader, whose goods he wants to buy, has any website. The consumer can be informed about such offer by his friends, and still be regarded as consumer entering into consumer contract under Article 17 Para 1 Brussels Ibis Regulation.

The decision in joined cases Pammer, Alpenhof immediately attracted some criticism (Bogdan, 2011). Despite the aim for uniform approach to the EU law, it is for the national courts to determine whether the professional directed its activities to the Member State of consumer’s domicile. As some argued: “One wonders of reference back to the national court

will provide a consistent approach to the interpretation of “Europeanised” conflicts rules whilst at the same time observing developments towards the maximalisation of consumer protection. If there was ever a connecting factor that merited an autonomous interpretation from the CJEU, the connecting factor “directing of activities” qualified as such” (Gillies, 2011, p. 563). According to other critics of this decision, it will have an important long-term impact on cross-border transactions within the EU and could have possible deterrent effect; therefore, a “dis-targeting” approach should have been adopted (Svantesson, 2011, p. 302; Svantesson, 2016a, pp. 599-601). There are no fully accurate technological means determining the geographical location of a person that attempts to access a certain website (Svantesson, 2012; Svantesson, 2017, pp. 201-213). However, the accuracy of geo-location technologies is still increasing and might an instrument for professionals to take steps to avoid certain states that is fora with “unfavorable” national laws (Trimble, 2012; Cleynebreugel, 2016).

#### 4. Conclusion

The research question in this paper was *whether the Court went too far and effectively diminished the legal certainty and predictability for application of relevant jurisdictional rules for disputes arising out of consumer contracts in the Brussels Ibis Regulation*. The research question was partly confirmed.

The Court of Justice has a crucial role in creating the framework for protection of consumers within the EU. In the judgment C-498/16 Maximilian Schrems, the Court of Justice applied a rather flexible interpretation of Article 17 Para 1 Brussels Ibis Regulation. The decision allowed for changes of circumstances to be taken into account. It also distinguished the right to enforce consumer rights from other types of professional activities. At the same time, the Court of Justice applied more strict interpretation of Article 18 Para 1 Brussels Ibis Regulation. It limited its application only to individual consumers as parties to consumer contracts, thus excluding “class actions”, i.e. the possibility of other consumers to assign their claims to one consumer who is domiciled in a more favorable forum. The judgment C-498/16 Maximilian Schrems is fully in accordance with the previous case law, yet allowing adapting to specific situation on the internet, thus upholding the *legal certainty and predictability for application of relevant jurisdictional rules for disputes arising out of consumer contracts in the Brussels Ibis Regulation*.

In the joined cases Pammer, Alpenhof, the Court of Justice adopted also a more flexible approach that is attentive to specific Internet-related circumstances. However, it did not create a uniform definition of “directing of activities”, which should create challenges to the Europeanization of private international rules within the EU. Moreover, in judgments C-190/11 Daniela Mühleitner and C-218/12 Lokman Emrek, the Court of Justice widened the scope of the “directing of activities” to the extent that, for the foreign professional, **it could diminish** *legal certainty and predictability for application of relevant jurisdictional rules for disputes arising out of consumer contracts in the Brussels Ibis Regulation*.

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## References

- [1] Bogdan M. (2011). Website Accessibility as a Basis for Jurisdiction under the Brussels I Regulation. *Masaryk University Journal of Law and Technology*, vol. 5:1, pp. 1-9.
- [2] Cleynenbreugel P. Van (2016). The European Commission's Geo-Blocking Proposals and the Future of EU E-commerce Regulation. *Masaryk University of Law and Technology*. vol. 11.1, pp. 39-62.
- [3] Drličková K. (2014). Experience with the Application of Article 5(1) of Brussels I Regulation Before Czech Courts. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 102-110.
- [4] Gillies L. (2011). Clarifying the "Philosophy of Article 15" in the Brussels I Regulation: C-585/08 Peter Pammer v Reederei Karl Schluter GmbH & Co And C-144/09 Hotel Alpenhof GesmbH v Oliver Heller. *International and Comparative Law Quarterly*, vol. 60, pp. 557-564.
- [5] Judgment of the Court (Grand Chamber) of 7 December 2010. Peter Pammer v Reederei Karl Schlüter GmbH & Co. KG (C-585/08) and Hotel Alpenhof GesmbH v Oliver Heller (C-144/09). Joined cases C-585/08 and C-144/09 [online]. [cit.2017-12-22]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1514734147606&uri=CELEX:62008CJ0585>
- [6] Judgment of the Court (Fourth Chamber) of 6 September 2012. Daniela Mühlleitner v Ahmad Yusufi, Wadat Yusufi. Case C-190/11. 09 [online]. [cit.2017-12-22]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1514733608265&uri=CELEX:62011CA0190>
- [7] Judgment of the Court (Third Chamber) of 17 October 2013. Lokman Emrek v Vlado Sabranovic. Case C-218/12. [online]. [cit.2017-02-22]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1514743599019&uri=CELEX:62012CJ0218>
- [8] Judgment of the Court (Third Chamber) of 25 January 2018. Maximilian Schrems v Facebook Ireland Limited. Case C-498/16. [online]. [cit.2017-02-22]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519224442514&uri=CELEX%3A62016CJ0498>
- [9] Kyselovská T. (2013). Elektronizace jako "nový" jev a jeho vliv na mezinárodní právo soukromé a procesní. In Rozehnalová N., Kyselovská T. *K některým vývojovým otázkám mezinárodního práva soukromého*. Brno: Masaryk University, pp. 59-84.
- [10] Kyselovská T. (2014). Příslušnost ve věcech spotřebitelských smluv. In Kyselovská T., Rozehnalová N. et al. *Rozhodování Soudního dvora EU ve věcech příslušnosti: analýza rozhodnutí dle nařízení Brusel Ibis*. Brno: Masarykova univerzita, Právnická fakulta, pp. 249 – 325.
- [11] Kyselovská T. (2014a) *Vybrané otázky vlivu elektronizace na evropské mezinárodní právo soukromé a procesní*. Brno: Masarykova univerzita.
- [12] Kyselovská T. (2014b). Recognition and Enforcement of Judgments under the Brussels I Regulation in the Czech Republic. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 425-433.

- [13] Kyselovská T. (2017). Online Cross-Border (Consumer) Contracts from the Point of View of the Case-law of the Court of Justice of the EU (2017). In Drličková K. and Kyselovská T. *COFOLA International 2017. Resolution of International Disputes (Conference Proceedings)*. Brno: Masaryk University, p. 78-92.
- [14] Maunsbach U. (2017). The CJEU as an Innovator – a New Perspective on the Development of Internet Related Case law. *Masaryk University Journal of Law and Technology*, vol. 11:1, pp. 77-101.
- [15] Opinion of Advocate General Bobek (2017). *Maximilian Schrems v. Facebook Ireland Limited. Case C-498/16*. [online]. [cit.2017-02-24]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1519385982109&uri=CELEX%3A62016CC0498>
- [16] Polčák R., Svantesson D. J. B. (2017). Information Sovereignty. Data Privacy, Sovereign Powers and the Rule of Law. Cheltenham: Edward Elgar Publishing Ltd.
- [17] Rozehnalová N., Drličková K., Kyselovská T., Valdhans J. (2013). *Mezinárodní právo soukromé Evropské unie (Nařízení Řím I, Nařízení Řím II, Nařízení Brusel I)*. Praha: Wolters Kluwer ČR.
- [18] Svantesson D. J. B. (2011). Pammer and Alpenhof – ECJ decision creates further uncertainty about when e-businesses “direct activities” to a consumer’s state under the Brussels I Regulation. *Computer Law & Security Review*, vol. 27, pp. 298-304.
- [19] Svantesson D. J. B. (2012). Time for the Law to Take Geolocation Technologies Seriously. *Journal of Private International Law*, vol. 8, no. 3, pp. 473 – 487.
- [20] Svantesson D. J. B. (2014). Sovereignty in International Law – How the Internet (Maybe) Changed Everything, but not for Long. *Masaryk University Journal of Law and Technology*, vol. 8:1, pp. 137 – 155.
- [21] Svantesson D. J. B. (2016a) *Private International Law and the Internet*. 3<sup>rd</sup> edition. Kluwer Law International.
- [22] Svantesson D. J. B. (2017). *Solving the Internet Jurisdiction Puzzle*. Oxford: Oxford University Press.
- [23] Trimble M (2012). The Future of Cybertravel: Legal Implications of the Evasion of Geolocation. *Fordham Intell. Prop. Media & Ent. L.J.*, Vol. 22:567, pp. 567 – 658 [online]. [cit.2018-09-22]. Available at: <http://scholars.law.unlv.edu/cgi/viewcontent.cgi?article=1661&context=facpub>

## The European Union, Visegrad Group and China's New Silk Road

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### **Abstract**

*This paper is devoted to an analysis of Visegrad Group (V4) countries' positions on China's New Silk Road project. Reflection on the EU and V4 perceptions of PRC on the background of discourse about One Belt and One Road (OBOR) follows. The aim of the paper is to give insights into the degree of engagement of the EU and V4 countries. Since the New Silk Road initiative emerged in China's strategic communication with the EU in 2013, there has been a general shift towards China in Eurasian and world affairs. Perhaps not many results of OBOR are currently visible in the whole EU, however China's low-key but gradual progress in OBOR implementation in different Eurasian regions shapes the future of EU. Will it bring economic cooperation, understanding or diplomatic repercussions and security questions? This paper argues for multifactorial engagement EU strategy to OBOR, and for a more active approach the Visegrad Group toward China, bridging EU-China communication.*

**Keywords:** China, cooperation, European Union, New Silk Road, Visegrad Group politics

**JEL Classification:** F15, P52, O57

### **1. Introduction**

The European Union (EU) and People's Republic of China (PRC), although separated from each other by some 4500 kilometers of Eurasian landmass, are economically among the most important regional actors in Eurasia in the past decade. The distance, which in the ancient times, the travelers and traders had to overcome along sidewalks of the ancient Silk Road from the Chinese city of Xi'An, for months via Central Asia and Persia to Levanta and Venice; can be overcome today in a half-day long flight, or in 2 weeks on railways from East Asia to Europe. The area between the two regions is where the future of Eurasia is being re-conceptualized in all complexities.

Currently there are three most relevant integration projects in Eurasia. The EU, the Eurasian Economic Union (EAEU) and One Belt One Road (OBOR) labelled often as the New Silk Road (Bond, 2017). With OBOR, China has introduced the most ambitious plan for inter-regional economic integration in the last half century. It comes as a positive impulse in times of environmental, humanitarian and security questions encompassing corners of Eurasia. The OBOR builds on an ambitious vision of bridging the continents of Asia, Europe and Africa. While the New Silk Road contributes to China's soft power, it also brings some problematic questions. Although OBOR is purely economic and infrastructural, non-military in essence,

some see worries in a long term. Even though its nature is non-coercive, some sense potential for aggregating wealth and power over time from various regions as Eurasia will become more China-centric (Freeman, 2017). Also in a more realist view, territorial scope of New Silk Road runs across unstable regions or some countries at odds with Europe.

The topic of New Silk Road project to integrate the Far East with Europe over Eurasian landmass into an infrastructural network takes attention in academia. Despite domestic problems, China has emerged as one of major actors in foreign direct investments (FDI) and PRC has been competing with the USA, EU and Japan with own developmental schemes for Africa, Asia and South America. As for Asia, the OBOR project is to generate economic integration across the corners of Eurasia. While China's global financial role will be shaped along this China-led trans-Asian economic integration, the EU's position appears to be not so flexible to better response to quickly changing Eurasian integration schemes. Overcoming interests often give threats, as well as opportunities.

European integration and Asian integration dynamics shape the future of the EU and its Member States. With externalities in limited scale, this dynamic also determines future roles of the Visegrad Group (or Visegrad Four, V4). The V4 is the platform of quadrilateral cooperation among Czechia, Hungary, Poland and Slovakia, all the EU member states. Together with Latvia, Lithuania and Estonia, the V4 countries are part of cooperation platform the China + 16 Central and Eastern European countries (CEEC), abbreviated as "China + 16".

The main aim of this paper is to reflect on perspectives of EU-China cooperation and position of Visegrad Group in the China's project - One Belt One Road (OBOR), stemming on perspectives of political geography (e.g. Kofroň 2017). The paper briefly describes EU's views, V4 countries' perception of PRC and possible expectations from the New Silk Road. Then the paper reflects on the positions of V4 countries – the EU Member States that constitute four member states in the China's 1 + 16 platform. The paper aims to shed more light about the discourse on China and the New Silk Road Economic Belt from the view of the EU and V4. The paper strives to answer questions, to what extent the V4 can learn from China-EU cooperation? What roles the V4 countries as the EU Member States are expected in the New Silk Road? What are the positions of V4 countries in China's 1 + 16 platform? Why the EU should implement multifactorial strategy towards the New Silk Road? This paper argues for attention to China's initiative in order to find positive externalities for the EU and the V4 and the Baltic states overlapping the EU and the China + 16 platform.

## **2. China-EU Relations Towards 2020**

While the Europe is currently the most prosperous region in the world, China's economic transformation is a huge success in the global economy since China became a member state of the World Trade Organization (WTO) in 2001 (see e.g. Fojtíková, 2012). The China's Gross Domestic Product (GDP) has increased from 54 trillion in 2013 to 87 trillion CNY in 2018 by the average economic growth of 7.1 percent. Impressive emergence of the world's largest middle class, eradication of poverty, gradual natural protection implementation or investments in education are few of many achievements China has scored in (China Daily, 2018), including renewables.

Economic success is a starting viewpoint for a more international leadership. While China has been assertive in East and South China Seas, the EU has been struggling passively with hard security situation along shaken regions of the Maghreb and Middle East, and Ukraine. European and Asian security dynamics have become interwoven into a more tighten security regional super-complex (Buzan, Weaver, 2003). Beijing has become a driving factor behind

tangible economic and infrastructural, institutional and international integrative forces in Eurasia.

The topic on EU-China strategic relationship was explored by Smith (2016) who stressed a ‘*negotiated order*’ and ‘*management of cooperation and competition in sectoral and institutional contexts*’ as factors. In 2016, fifteen years after China entered the World Trade Organization in 2001, the EU adopted a new strategy on PRC towards 2021, reflecting the transformative patterns from China’s economic success in the world. Since the Investment Agreement in place from 2013, the EU-China 2020 Strategic Agenda for Cooperation puts the EU-China Investment Agreement central for development of EU’s long-term bilateral relations with the PRC. (European Commission, 2018). While the estimated trade between the EU and China reaches often over 1 billion EURO per day, in past 30 years the European-Chinese trade has increased by over 40 times (Jitaru and Popescu, 2017). The EU-China trade volume hit 520.75 billion USD in 2015 while the EU’s gross exports to China reached 9.5 percent of the EU’s gross exports and imports from China reached 20.3 percent of the EU’s gross imports (Gang, 2017).

Even though China’s economic growth has slowed down under 7% in 2017, the EU was struggling with a more modest economic growth. In the most economically developed parts of the Western and Northern Europe, the growth is smaller often only above 1 percent, while in the converging Central European the EU Member States recent growth overcame 3 percent (e.g. Czechia, Poland, Slovakia) in the Visegrad Group. Central European countries have been striving to catch-up with the EU average economic development, and all achieved some satisfactory results, (see e.g. Staníčková, 2015 or Melecký and Skokan, 2011). The V4 region has become one the EU’s motors in sub-regional economic growth.

In the past decade EU, V4 and China were dealing with various domestic challenges. As elsewhere described (Jitaru and Popescu, 2017), democratic system of the EU has reached “international identity” but also was suffering from asymmetric challenges such as impacts of illegal economic migration, wave of political populism, changing global natural environment and securitization. V4 countries were at odds with different views on some of listed issues vis-à-vis other Member States for which V4 earned also criticism. As for PRC, the Chinese government presented a successful example of economic transformation, stability and prosperity to the Chinese people, though some asymmetric problems still exist, including environmental issues, risks of domestic political isolationism, or relative excessive securitization in Asia.

Maher (2016) urges for the EU’s need for a new conceptual framework on China policy, following his criticism of the EU comprehensive strategic partnership with China from 2003 seeing it as shallow and limited only to trade, often uneven and debatable. With regard the V4 countries within the EU, some dynamics are visible thanks to increased multi-sectoral cooperation with China after 2013, including people-to-people exchange enabled due to newly open flight connections and increasing potential of the freight exchange from China to the EU. There were also ideological views reflected also in V4 context, yet without any tangible results (e.g. discourse on possible Chinese participation in the project of Danube-Oder canal in Czechia).

Gabriel and Schmelcher (2017) addressed scenarios for China-EU relations urging the EU to create better climate for future shaping of EU-Chinese relations. China is seen as politically and economically strengthened vis-a-vis the EU, while the EU remains the most stable and prosperous region of the Eurasian continent. The US factor remains the main determinant of EU-China relations. The technological progress is as a key area for the EU, in which it is possible to flexibly deal with EU-China-US trilateral dynamics (Gabriel, Schmelcher, 2017).



In the EU's contemporary dialogue with China there are some areas of criticism that cover different issues such as human rights, capitalist economy model, anti-dumping duties, cybersecurity or international issues, to mention some. Having different opinions however is not a hindrance to communicate about what can be done for better understanding and friendship. There are many areas to EU-China mutual interests such as recognition, trade, prosperity and stability, people-to-people exchange and multi-cultural cooperation, addressing environmental challenges or security questions (criminality and terrorism), and promotion of peace and understanding, to name some. Though the contemporary EU-China's relations are focused on win-win cooperation, some see the lack of real mutual gain (Maher, 2016). What signals bring the New Silk Road to Europe in this regard towards 2020?

### **3. The New Silk Road and European Union**

The geography of China's One Belt One Road (OBOR) is composed of two inter-regional economic-infrastructure belts. The territorial economic belt across Eurasian continent is conceptualized in the China's New Silk Road Economic Belt project. The 21<sup>st</sup> Century Maritime Silk Road project encompasses belt stretching from South East Asia across Indian Ocean towards East Africa. OBOR addresses an area of the population of almost 4.5 billion with economic output of over \$21 trillion (Freeman, 2017). By connecting the Pacific with the Indian and Atlantic Oceans, and with stretching economic integrative belt across Central Asia to Europe, China aspires to become a central actor to Eurasian affairs. With global center of economic activity in Asia-Pacific area, China would integrate the region concentrating 70% of population and 75% of energy reserves (Freeman, 2017).

Overcoming distance over territories updates to a traditional view on territorial importance of routes in comparison to maritime routes. The Trans-Caspian International Transport Route is 6500 km long corridor. Next corridor project was inaugurated in 2017 – the Baku-Tbilisi-Kars (BTK) Railway via Azerbaijan, Georgia, and Turkey with China-EU passenger and freight connections. Chinese transportation projects are of vital interests to landlocked countries of Central Asia and the South Caucasus (Shahbazov, 2018). From China's city of Urumqi to Europe it is expected to cut the transportation time from 60 days by sea to 14 and less days by rail.

Trans-Eurasian networks of connections are expected to be more stable. They will strongly improve connectivity of landlocked countries, assigning them new economic roles and enable them access to resources. For faster data exchanges across Eurasia the investors are willing to invest in the "high frequency trading" – the automated financial computer instruments that will innovate EU – China trade (Freeman, 2017). A new integration system will arise. Elements of territorial infrastructural links with Europe consist of railways and highways, and the technosphere of pipelines, power grids, fiber optic cables, air and sea ports. These elements will regionally generate economic opportunities at real market requirements with institutional facilities (Freeman, 2017).

China's economic growth has not bridged the growing domestic provincial inequalities yet, even though many efforts were conducted in Central and Western China. How come Beijing struggles with domestic economic integration while trying to succeed abroad? (Freeman, 2017). Investments in Eurasian infrastructure generates access to markets and resources, making productive use of China's overcapacity, stabilizing employment and contributing to foreign trade with new outlets for foreign exchange reserves. China creates channels to outsource industrial overcapacity across Central and Northern corridors of the New Silk Road (Freeman, 2017). Work on these projects will be conducted mainly by Chinese firms through state-owned enterprises (SOE).

Chinese government announced investments of over 100 billion USD for infrastructural projects within the OBOR. In contrast to the USA, some EU Member States joined the Asian Infrastructure and Investment Bank. Fourteen EU Member States<sup>8</sup> out from twenty-eight countries decided to join this China's development bank initiative. From the V4 only Hungary and Poland proceeded. Asian infrastructural development is expected to foster EU-China financial and monetary cooperation that contributes to the stabilization of EUR and the internationalization of RMB (Gang, 2017). There are many perspective areas for cooperation in this area.

In the field of EU-China cooperation on regional economic integration, China learns from the EU's experience in cohesiveness policy making. Perspectives of EU-China cooperation in regional policy include promotion of the development of urbanization and coordination of urban and rural interaction, a stable financial background for regional policy, increasing regional cooperation, improvement of regional policy implementation, analysis and studying increase of the regional cooperation with the EU. The limitations of the European model on the Chinese regional policy include different geographic scope and institutional difference. China is not yet prepared for absorption of the EU funds (e.g. lacking on transparency, subsidiarity experience, etc.) (Minarčíková, 2016). It is questionable to what extent the EU can contribute to conceptualization of the New Silk Road given rich integration experience, but it is the field where the EU can share best practices in common EU-China interests, including democratic and liberal regimes that interact with the system and regime of Chinese characteristics.

#### **4. The Visegrad Group on the New Silk Road**

China's economic diplomacy for the New Silk Road combines capital and soft power approach. Looking at China's geography for the sixteen Central and Eastern European countries, the V4 region is strategically located between the Baltics (Baltic states + Belarus) in the North and the Balkans (and Greece) in the South. Chinese influence on the Western Balkans is seen contradictory. Beijing seems to benefit from EU-led convergence towards political stability (to implement economic agenda), whilst Chinese activities may result in a divergence from the EU criteria and an undermining of EU membership prospects for the recipients (Lagazzi and Vít, 2017).

Within the China's 1 + 16 platform, the regional V4 trade with China makes  $\frac{3}{4}$  of the total trade of the member CEEC with China. The China's 1 + 16 CEEC platform has deepened its institutional anchorage across the 16 CEEC including V4 countries. The format 1+16 has been incorporated to OBOR institutional strategy and mentioned in the 12<sup>th</sup> and 13<sup>th</sup> five-year plans. CEEC shows no additional intra-structuralizing of regional scope of CEEC currently (Fürst, 2016). With its relative openness it may be addressed with CEEC co-initiatives.

There has been an increase of interest about China in individual partner countries within the V4 after 2010. How China is perceived by Czech, Hungarian and Slovak media was analysed in the 'influence' project on 1257 contributions in media for Czechia, 3921 for Hungary and 2603 for Slovakia in total (2017). The results show that image of China in Czechia remains mostly negative, stereotyped and polarized, being rather a domain of politics than public. In Hungary, China discourse is strongly politized and monotonous, dealing often with materialist

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<sup>8</sup> Austria, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Malta, Netherlands, Poland, Portugal, Spain, Sweden. Other countries from Europe include Iceland, Luxembourg, Norway, Switzerland, United Kingdom.

themes. In contrast, Slovak discourse on China is typically mostly neutral but pro-bilaterally limited.

With regards to East Asia in general, Visegrad Group as a unified regional partnership has a practical sense in approaching China in trade and investments in a co-operative matter (Laš, 2017). One example is Southeast Asia at China's southern borders. The EU and ASEAN are complementary natural trading partners that share a suitable business environment (Vahalík, 2014). Cluster organizations of the V4 countries started to seek common market opportunities in ASEAN after the year 2010. Creation of sector-specific clusters of key industries in individual V4 countries was aimed at development small-medium enterprises, which potential was to be exploited and increased. While the V4 is an informal group based on non-legally binding political proclamations, the ASEAN countries have regional institutions based on multilateral treaties (Marušiak, 2015), and prefer to approach foreign partners as representatives of a region too. Common V4 strategy to ASEAN countries emerged from practical reasons, such as co-location of consular activities in different ASEAN states (National Cluster Association, 2014). Leading clusters were merged into a branding group of selected representatives from mechanical engineering (Czechia), furniture industry (Hungary), telecommunications (Poland) and automotive industry (Slovakia). It was expected that a common V4 approach would score.

The V4 should consider mutual coordinative approach to build stronger market power and broking position with the EU in coordinated cooperation on the New Silk Road (Kopecký, Lidl, Rezková, Vondrážka, 2016). As V4 experience in cluster cooperation shows on the ASEAN approach, mutual approach to complex East Asian business and cultural environment is crucial. The Western EU Member States however expressed some concerns over the China + 16 CEEC cooperation, worries from exercising influence in possibly risky strategic choices of EU Member States that could harm the unity of the EU, though China's investments in the region are small comparing to promising outlook (Turcsanyi, 2017). While China used to be a relatively small investor in the V4 region comparing to Japan, Korea and Taiwan from East Asia, with the 1 + 16 platform China's engagement increased and initiatives are worth to recognize China as a constructive partner with inspiring vision.

## 5. Conclusion

Comparing to Japan, South Korea and Taiwan, recent engagement of PRC in the V4 region is still modest in the mode to catch up in investments and exchange with other EU East Asian partners. China is well recognized as a partner in the EU and in the world. Many positive effects of this are visible in recent cooperation initiatives that culminate in the New Silk Road initiative. For the V4 countries as the EU Member States it means closer engagement and coordination with surrounding regions in building bilateral and multilateral relations with China.

The Visegrad countries in the China's 1 + 16 cooperation platform have economic potential and geographic position for New Silk Road functions. Their positive performance being the EU Member States gives them competitive advantage in the EU production standards and markets as well. V4 may become an intersection for EU-China's cooperation. V4 however lacks on unified strategic reference framework within EU-China cooperation.

What is the degree of EU-V4 engagement in the New Silk Road? While the EU appears to cautiously observe the initiative, there are many European states quite open to this cooperation, and join the Asian Infrastructure and Investment Bank (AIIB). Czechia, Hungary, Poland and Slovakia as members of the China + 16 CEEC cooperation platform share advantageous

features for cooperation with China. The Balkans' function is a future transit exchange route from the Greek port of Piraeus closer to Western Europe. The Baltics in cooperation with Finland will play constructive roles in logistic hubs for China in the EU, and project of Ice Silk Road via Arctic routes may add to the importance of such development. V4 as a region of the population over 60 million can play key roles but these have to be conceptualized. V4 countries engagement has been rather fragmented in cooperation initiatives. Another topic for V4 – China recognition is possible common engagement in the AIIB, as Hungary and Poland took their active parts in it.

The Visegrad Group has options to co-develop cooperation of the EU part in the New Silk Road, but a travel map for EU-V4-Baltic states is lacking. This can be achieved by V4 cooperation with other EU Member States of Estonia, Lithuania and Latvia present in the China 1+16 CEEC, at the level of discussion at the institutional level of the EU to identify a multifactorial strategy to the New Silk Road. This strategy would seek responses to functional sectoral differences to boost cooperation that could co-match China-EU common expectations.

Within the V4, individual countries are engaged in cooperation and trade with China in different sectors and areas. It will be useful for the EU to help the Visegrad Group to coordinate differences and co-develop functions of China's project schemes. This will assign the V4 region within the EU new roles that are expected to contrIBUTE to economic growth, stability and trade, as well as will generate new geography of economic integration with innovative potential. On the other hand, it will be necessary for China to keep trying to meet the EU's expectation in transparency and standardization. Cooperation of China-EU is in the interest of international community. By decreasing regional inequalities in often ideologically alienated countries of Eurasia, based on international peace, law and understanding, the EU, V4 and China can contribute to better future in general.

## References

- [1] Bond, I. (2017). *The EU, the Eurasian Economic Union and One Belt, One Road: Can they work together?* Centre for European Reform [online]. [cit. 2018-02-05] Available at: [http://www.cer.eu/sites/default/files/pb\\_eurasian\\_IB\\_16.3.17\\_0.pdf](http://www.cer.eu/sites/default/files/pb_eurasian_IB_16.3.17_0.pdf).
- [2] Buzan, B. and Weaver, O. (2003). *Regions and Powers: The Structure of International Security*. Cambridge: Cambridge University Press.
- [3] China Daily. (2018). *Numbers reveal growth in 5 years. 2018 Government Work Report* [online]. [cit. 2018-03-06] Available at: <http://www.chinadaily.com.cn/a/201803/06/WS5a9e084da3106e7dcc13fdcf.html>
- [4] China Influence in Central Europe (2018). [online]. [cit. 2018-02-14] Available at: <http://www.chinfluence.eu/about/>
- [5] European Commission. (2018). *China. Countries and Regions* [online]. [cit. 2018-02-28] Available at: [http://ec.europa.eu/trade/policy/countries-and-regions/countries/china/index\\_en.htm](http://ec.europa.eu/trade/policy/countries-and-regions/countries/china/index_en.htm).
- [6] Fojtíková, L. (2012). China External Trade after Its Entrance into the WTO with the Impact on the EU. In *Proceedings of the 1st International Conference on European Integration 2012*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 56–65.
- [7] Freeman, Ch., W. (2017). *China and the Economic Integration of Europe and Asia. Middle East Policy Council* [online]. [cit. 2018-01-28] Available at: <http://www.mepc.org/speeches/china-and-economic-integration-europe-and-asia>.

- [8] Fürst, R. (2016). *Funguje formát Čína + 16 postkomunistických států? Policy Paper*. Praha: Ústav mezinárodních vztahů.
- [9] Gabriel, J. and Schmelcher, S. (2017). Three scenarios for EU-China relations 2025. *Futures (London)*, Issue Preprints.
- [10] Gang, L. (2017). Economic Ties Stabilize China-EU Relations. *Special Report*. China Today.
- [11] Jitaru, L. and Popescul, L. F. (2017). Economic relations EU-China - the mechanism that the European Union outlines the position of the economic actor. *CES Working Papers – Volume IX*, Issue 3, pp. 255-271.
- [12] Lagazzi, A. and Vít, M. (2017). *The Good, the Bad and the Ugly: Chinese influence in the Western Balkans*. Europeum, Institute for European Policy [online]. [cit. 2018-03-01] Available at: <http://www.europeum.org/data/articles/al-mv.pdf>
- [13] Kofroň, J. (2017). Shattered Spaces of Political Geography. *Acta Politologica*. Vol. 9, no. 3, pp. 3–21.
- [14] Kopecký, V., Lidl, V., Rezková, A. and Vondrážka, M. (2016). *Nová Hedvábná cesta: výzvy a příležitosti*. Asociace pro mezinárodní otázky [online]. [cit. 2016-07-16] Available at: [http://www.amo.cz/wp-content/uploads/2016/03/amocz\\_RP\\_1\\_2016\\_web.pdf](http://www.amo.cz/wp-content/uploads/2016/03/amocz_RP_1_2016_web.pdf).
- [15] Laš, L. (2017). Bridging the Visegrad Group and East Asia Through Cooperation. In *Overcoming Controversies in East Asia*. Łódź: Łódź University Press, Contemporary Asian Studies Series, pp. 137–154.
- [16] Maher, R. (2016). The elusive EU-China strategic partnership. *International Affairs*. Vol. 92 Issue 4, pp. 959–976.
- [17] Marušiak, J. (2015). *What might Thailand and ASEAN learn from the Visegrad Group?* Research Gate [online]. [cit. 2018-01-28] Available at: [https://www.researchgate.net/post/What\\_might\\_Thailand\\_and\\_ASEAN\\_learn\\_from\\_the\\_Visegrad\\_Group](https://www.researchgate.net/post/What_might_Thailand_and_ASEAN_learn_from_the_Visegrad_Group).
- [18] Melecký, L. and Skokan, K. (2011). EU Cohesion and Its Evaluation in the Case of Visegrad Four Countries. In *Liberec Economic Forum 2011. Proceedings of the 10th International Conference*. Liberec: Technical University of Liberec, pp. 314–326.
- [19] Minarčíková, E. (2016). EU-China Cooperation on Regional Policy. *Perspectives in Science*, 7. pp. 30–38.
- [20] National Cluster Association (2014). Boosting clusters in Visegrad countries. In *Visegrad Group clusters set their sights on Southeast Asia – final conference*. Ostrava: Národní klastrová asociace [online]. [cit. 2018-01-28] Available at: <http://klastr-portal.cz/Resources/Upload/Home/v4clusters/press-releases/v4c-ostrava-2014-11-04-05-after.pdf>.
- [21] Smith, M. (2016). EU Diplomacy and the **EU–China** strategic relationship: framing, negotiation and management. *Cambridge Review of International Affairs*, Vol. 29 Issue 1, pp. 78–98.
- [22] Shahbazov, F. (2018). *China to Europe By Way of Azerbaijan's Trans-Caspian Gateway* [online]. [cit. 2018-01-28] Available at:

- <https://thediplomat.com/2018/02/china-to-europe-by-way-of-azerbaijans-trans-caspian-gateway/>
- [23] Staničková, M. (2015). Classifying The EU Competitiveness Factors using Multivariate Statistical Methods. *Procedia Economics and Finance*, Vol. 23, pp. 313-320.
- [24] Turcsanyi, R. (2017). *Growing Tensions Between China and the EU Over 16+1 Platform*. The Diplomat [online]. [cit. 2018-01-28] Available at: <https://thediplomat.com/2017/11/growing-tensions-between-china-and-the-eu-over-161-platform/>.
- [25] Vahalík, B. (2014). Regional Bilateral Trade Analysis of the European Union, China and ASEAN. *Procedia Economics and Finance*, Vol. 12, pp. 709-717.

# **Indebtedness of Local Government Units as a Barrier to the Absorption of European Union Funds in Poland**

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## **Abstract**

*The financial situation of local government units is reflected in their investment and development capacity. Due to limited financial resources, they have to turn to repayable sources of funding in order to meet the co-financing requirement. This may lead to destabilisation in securing repayable sources of funding for investments and limited absorption of EU funds. The aim of the paper is to evaluate the level of indebtedness of local government units in Poland in the context of the absorption of European Funds for investments. The paper is theoretical and empirical in character. The theoretical part was based on study of the literature, which involved collection, specification and characterisation of data. Based on the information gathered in the theoretical part, the empirical part was completed in order to achieve the objective of the paper. The research results indicate that in the current financing period (2014-2020) municipal debt is a significant barrier to securing EU funding for public investments.*

**Keywords:** barrier, community, debt, European Union funds, investment.

**JEL Classification:** H40, H72, O52

## **1. Introduction**

Since its integration with EU structures, Poland has seen significant changes, particularly in the area of investment activity undertaken by local governments. This is because a chance appeared to secure EU funding as part of implemented instruments of regional policy. In terms of the total amount of EU funds, in both the last and current programming period, Poland was the largest beneficiary among Eastern European EU member states. Between 2007 and 2013, it received over 67 billion EUR, and in the 2014-2020 budget period the allocation exceeded 77 billion EUR (Medve-Bálint, Bohle, 2016; Dellmuth, 2011; Mynarzova, Kana, Okręglička, 2016).

Implementation of investment projects, including those co-financed with EU funds, requires significant financial participation by local government units, which often exceeds their budgetary capabilities (Mohl and Hagen, 2010). In such situations, they have to rely on repayable sources of funding, i.e. loans, or, in the case of some local governments, issue municipal bonds. All these measures lead to increased debt.

The aim of this article is to evaluate the level of indebtedness of local government units in Poland in the context of the absorption of European Funds for investments.

## 2. Problem Formulation and Methodology

Absorption capacity is the extent to which a country is able to effectively and efficiently spend money from EU funds, and is expressed in percentage of the total allocation. Experts indicate a relationship between absorption and three main indicators: macroeconomic potential (in relation to the gross domestic product of a country); financial capacity, i.e. the ability to co-finance the EU-supported programmes and projects; and administrative capacity, i.e. the ability of central and local authorities to manage EU programmes and projects (Katsarova [online], 2013; Bachtler and Ferry, 2015).

### 2.1 Theoretical Background

Polish publications distinguish three groups of factors facilitating efficient absorption of EU funds by local government units in Poland:

1. factors related to the overall financial situation of local government units, which is measured by their ability to provide sufficient own funds for implementation of investment projects (own financial contribution),
2. factors connected with creation of an appropriate, coordinated system of long-term strategies and plans, especially a relationship between material and financial planning,
3. factors connected with the functioning of the institutional absorption system, which is based on relevant laws on the implementation of regional development policy and connected with an efficient system of financial flows.

Further, it should be stressed that support funds are paid out as reimbursement of the expenditure incurred earlier, therefore local government units have to raise the total capital necessary to finance investment expenditure (Kornberger-Sokołowska [online]; Jurewicz, 2016; Ławińska, 2016).

The European Commission established that the factors that had delayed absorption of funds in the 2007-2013 period included: the late start of programmes due to the extension of the previous period, an underlying lack of (or even decline in) administrative capacity, the challenges in preparing major infrastructure projects and obtaining Commission's approval, changes in EU legislation, inconsistent political ownership (changes in national and regional governments, changes to institutions) and the effects of national sectoral reforms (Katsarova [online], 2013).

The indebtedness of local government units is affected by economic and political factors as well as legal regulations (Rivenbark, Roenigk and Allison 2010). The causes of the increase in the deficit and debt of local governments include, among other things (Parlińska, 2014, pp. 191-192; Korombel, 2012; Poniatowicz, 2010, p. 38; Korolewska, Marchewka-Bartkowiak, 2011):

- decrease in own revenue due to the economic crisis,
- higher expenditure dynamics compared to revenue dynamics,
- mobilisation of public investments co-financed with EU funds,
- exhausting the possibilities of incurring debt on the terms applicable until the end of 2013 and concerns about the loss of credit capacity after new limits on indebtedness of local government units come into force.

Local government units have a statutory right to incur liabilities. However, in order to prevent excessive indebtedness of local government units in Poland, debt limits were introduced. At first, they were uniform for all units (until 2013), and later individualised (since 2014). Since 2014, the only limit on the debt incurred by a local government unit is individual debt ratio



(Polish: IWZ). The principle of determining the IWZ ratio was laid out in the Act on public finance (2009). The formula for calculating the ratio (IWZ) is as follows:

$$\left(\frac{R+O}{D}\right)_n \leq \frac{1}{3} \cdot \left( \frac{Db_{n-1}+Sm_{n-1}-Wb_{n-1}}{D_{n-1}} + \frac{Db_{n-2}+Sm_{n-2}-Wb_{n-2}}{D_{n-2}} + \frac{Db_{n-3}+Sm_{n-3}-Wb_{n-3}}{D_{n-3}} \right) \quad (1)$$

where:

R - the total amount, as planned for the budget year, of credit and loan payments and redemption of securities intended for financing the planned budget deficit, repaying prior liabilities, providing advance funds to secure financing of activities from the EU budget, and financing investment projects;

O - interests on credits and loans took out to cover the temporary budget deficit throughout the year, finance the planned budget deficit, repay prior liabilities, provide advance funds to secure financing of the activities from the EU budget and to finance investment projects, as well as interests and discount on securities issued for the above purposes and for repayment of the amounts resulting from provided sureties and guarantees;

D - overall budget revenue in a given budget year;

Db - current revenue;

Sm - revenue from the sale of assets;

Wb - current expenditure;

n - budget year for which the ratio is established;

n-1 – the year preceding the budget year for which the ratio is established;

n-2 – the year preceding the budget year by two years;

n-3 – the year preceding the budget year by three years.

The individual debt ratio (IWZ) states that in a given budget year the ratio of the value of the liabilities to be repaid (along with the costs of their servicing) to overall budget revenue of a local government unit cannot exceed the arithmetical mean for the relations, as calculated for the last three years, of its current revenue increased by revenue from the sale of assets and decreased by current expenditure to overall budget revenue. For each local government unit, the calculation of the individual ratio is based on budget execution data for the last two years and on planned values from the year preceding the year for which the ratio is calculated (Korolewska, Marchewka-Bartkowiak, 2011).

According to local authorities, the new ratio is in many cases very restrictive. It may limit the absorption of EU funds in the current financial perspective (2014-2020). This applies to many local government units with strong economic potential (Sierak [online], 2016). G. Medve-Bálint and D. Bohle (2016) conducted studies on the relationship between the level of debt in gminas and the utilisation of EU funds in Poland and in Hungary. The results of their empirical analyses confirmed that the indebtedness of gminas in Poland was correlated with the amount of EU funds obtained by them. More precisely, the bigger the difference between total costs of a project and the total funding, the bigger the level of debt of a given gmina.

## 2.2 Methodology

The research covered local government units taken together as well as their categories, i.e. gminas, cities with poviat rights, poviats and voivodeships. In order to achieve the research aim, the following research questions have been formulated:

- What is the legal restraint on the indebtedness of local government units in Poland?
- What is the level and dynamics of changes in the budget deficit of local government units?

- What is the amount and structure of the debt of local government units, both the total debt and the debt of different categories of such units?

The paper is theoretical and empirical in character. The theoretical part was based on study of the literature, which involved collection, specification and characterisation of data. The information and data on the subject addressed in the paper was derived from the literature and existing legal regulations. Based on the information gathered in the theoretical part, the empirical part was completed in order to achieve the objective of the paper and answer the research questions.

The empirical material used to conduct the analyses was obtained from databases of the Ministry of Finance and showed the different parameters of the economic situation of local government units. Another important source of information was the resources of the Polish Central Statistical Office (GUS). They were used to assess the level of absorption of structural funds by local government units. The temporal scope of the analyses was limited to the current period of programming EU funds so as to comply with the principle of data comparability and accessibility. The subjects of the analyses were all local government units in Poland. For assessment of the results obtained, the method of temporal and spatial statistical comparisons was used.

The research period covers the years 2014-2016. For 2017, only selected data on the indebtedness of local government units was available, covering only the first three quarters. The data was presented in nominal values.

### 3. Problem Solution

The level of indebtedness of local government units is affected not only by the debt incurred in previous years, but also by the current level of budget revenue and expenditure. The result (deficit or surplus) of local government units in Poland in the 2014-2016 period is presented in table 1.

**Table 1: The Overall Result of Local Government Units in Poland Between 2014 and 2016 (in thousand PLN)**

Specification	2014	2015	2016
Gminas	-521,164	1,722,862	3,619,754
Poviats	-1,495	237,369	647,743
Cities with poviat rights	-1,401,594	735,936	2,478,630
Voivodeships	-492,709	-92,518	888,245
<b>Local government units – in total</b>	<b>-2,416,962</b>	<b>2,603,649</b>	<b>7,634,372</b>

Source: own study based on Report on public budget execution: Information on the execution of budgets of local government units (for the years: 2014, 2015 and 2016); Ministry of Finance (online, 2018)

In 2014, the budgets of local government units recorded an overall deficit of 2,416,962 thousand PLN. In 2014, 48.3% of local government units recorded a deficit of 6,072,675 thousand PLN, whereas 51.7% of them recorded a surplus of 3,655,713 thousand PLN. In 2015, budgets of as many as 71.5% of local government units showed a budget surplus. An upward trend was also observed in 2016, when 80% of local government units recorded a budget surplus of 8,682,820 thousand PLN in total, whereas 20% of units showed a budget deficit of 1 048 448 thousand PLN.

Liabilities of local government units by debt instruments in the 2014-2017 period are compared in table 2.

**Table 2: Liabilities of Local Government Units by Debt Instruments (in thousand PLN) in the 2014-2016 Period and in the Third Quarter of 2017**

Specification	2014	2015	2016	2017 (III quarter)
Securities	4,267,830	4,157,881	4,272,684	4,324,293
Credits and loans	67,628,939	67,328,762	64,653,237	61,742,066
Mature liabilities	213,102	148,037	94,013	80,157
<b>Liabilities of local government units in total</b>	<b>72,109,871</b>	<b>71,634,680</b>	<b>69,019,934</b>	<b>66,146,516</b>

Source: own study based on Report on public budget execution: Information on the execution of budgets of local government units (for the years: 2014, 2015 and 2016); Ministry of Finance (online, 2018)

According to data of the Ministry of Finance (online, 2018), in 2014 nominal total liabilities of local government units increased by 4.3% compared to 2013. At the same time, it should be stressed that in 2014 only liabilities related to credits and loans increased (by 6.5%), whereas the other debt instruments were lower than in 2013. In the overall structure of liabilities of local government units in 2014, credits and loans accounted for the biggest share (93.8%), recording an increase by 2.0 percentage points compared to the previous year.

In 2015, overall liabilities of local government units by debt instruments (compared to 2014) were lower by 0.7%. In the structure of overall liabilities of local government units in 2015, credits and loans accounted for the biggest share (94%), an increase by 0.2 percentage points compared to the previous year.

In the structure of overall liabilities of local government units in 2016, credits and loans accounted for the biggest share (94.7%), a decrease by 0.3 percentage points compared to the previous year. In 2016, the indebtedness of all the categories of local government units was lower than the indebtedness at the end of 2015.

Credits and loans for implementation of programmes and projects partially financed with EU funds in the different categories of local government units in the 2014-2016 period are compared in table 3.

**Table 3: Local Government Units' Liabilities Related to Credits and Loans for Implementation of Programmes and Projects Partially Financed with EU Funds (in thousand PLN) in the 2014-2016 Period**

Specification	2014	2015	2016
Gminas	2,327,675	1,797,507	1,326,496
Poviats	177,620	177,711	158,152
Cities with poviat rights	5,999,107	4,250,558	2,100,587
Voivodeships	718,437	617,160	641,995
<b>Local government units in total</b>	<b>9,222,839</b>	<b>6,842,936</b>	<b>4,227,231</b>

Source: own study based on Report on public budget execution: Information on the execution of budgets of local government units (for the years: 2014, 2015 and 2016); Ministry of Finance (online, 2018)

The data presented in table 3 shows that in the research period cities with poviats rights accounted for the biggest share (in %) in local government units' overall credits and loans taken out for implementation of EU-funded programmes and projects (annual average of 59%). The second biggest share in this type of indebtedness was recorded by gminas (annual average of 27.6%), followed by voivodeships (annual average of 10.7%) and poviats (2.7%).

Data of the Ministry of Finance (online, 2018) shows that in 2014 the debt incurred in voivodeships for the implementation of EU-funded projects increased by 87.8% compared to 2013, whereas in the remaining categories of local government units it was lower than in 2013. In 2015, in all categories of local government units, the debt incurred for the implementation of EU programmes and projects was lower than in 2014, whereas in 2016 it accounted for 6.1% of the debt of local government units and was 38.2% lower than in 2015. Only in voivodeships the debt incurred for the implementation of EU-funded projects was higher than the figure at the end of 2015.

As from 1 January 2014, an individual debt ratio for local government units is applicable in Poland. Table 4 presents the number and share (in %) of local government units in the different groups that did not comply with the individual debt ratio.

**Table 4: The Number and Share (in %) of Local government Units in the Different Groups that Did Not Comply with the Individual Debt Ratio in the 2014-2016 Period**

Specification	2014		2015		2016	
	number	%	number	%	number	%
Gminas	47	1.9	57	2.4	33	1.4
Poviats	16	5.1	20	6.4	14	4.5
Cities with poviat rights	1	1.5	1	1.5	1	1.5
Voivodeships	0	0	0	0	0	0
<b>Local government units in total</b>	<b>64</b>	<b>2.3</b>	<b>78</b>	<b>2.8</b>	<b>48</b>	<b>1.7</b>

Source: own study based on Report on public budget execution: Information on the execution of budgets of local government units (for the years: 2014, 2015 and 2016); Ministry of Finance (online, 2018)

Information from the Ministry of Finance (online, 2018) shows that:

- in 2014, 28 units were requested to develop a resolution programme, whereas 64 units (i.e. 2.3% of all local government units) did not comply with the individual debt repayment ratio,
- in 2015, 31 units were requested to develop a resolution programme, whereas 78 units (i.e. 2.8% of all local government units) did not comply with the individual debt repayment ratio,
- in 2016, 31 units were requested to develop a resolution programme, whereas 48 units (i.e. 1.7% of all local government units) did not comply with the individual debt repayment ratio.

It is important to add that the Act on public finance envisages the possibility of providing assistance in the form of a loan from the state budget to local government units which are in a difficult financial situation. Detailed principles for granting a loan from the state budget were specified in art. 224 of the Act on public finance: "a local government unit can be granted a loan from the state budget if the local government unit is implementing or undertakes the implementation of a resolution programme, and analysis of the resolution programme shows that the situation of such a unit is highly likely to improve, the unit will perform its statutory

tasks more effectively and fulfil the principles concerning the balancing of current expenditure and the individual debt ratio by the end of the year in which the deadline for the loan repayment passes, and it will repay the loan along with the interests."

To date, this form of support has been used by 34 local government units, with 3, 2 and 5 local governments receiving a loan in 2014, 2015 and 2016 respectively. As of 31 December 2016, 24 local government units have to repay loans from the state budget.

To assess the extent to which EU funds were absorbed, a per capita rate of secured EU funding can be used. Table 5 presents the amount of EU funds (in PLN) per inhabitant secured by all local government units in Poland for the implementation of projects and programmes in the research period.

**Table 5: EU Funds (in PLN) Per Inhabitant Secured by All Local Government Units in Poland in the 2014-2016 Period**

Specification	2014	2015	2016
Local government units in total	36.80	46.30	28.10

Source: own study based on GUS (online, 2018)

In order to assess the level of the indicator presented in table 5, it is necessary to look at the data from previous years (GUS [online], 2018). Since 2010, the amounts of EU funds per inhabitant secured by all local government units in Poland were 46.20 PLN, 46.40 PLN, 43.90 PLN and 39.00 PLN in 2010, 2011, 2012 and 2013 respectively. The most dynamic increase in the amount of per capita funds obtained from the EU was recorded in 2012, followed by a slow-down in the upward trend. The indicator had the lowest value in 2016.

Investment projects co-financed with EU funds which are implemented by local government units require own financial contribution. Within the meaning of the regulations in force, the funds as part of own financial contribution can be public revenue and earnings. As far as the former are concerned, local government units can use public levies and transfers from the state budget or other local government units, e.g. targeted subsidies for investments. The latter mainly include financial flows, which result in liabilities incurred by a local government unit (credits and loans and issued securities). There is no aggregated data on the detailed structure (sources) of financing own financial contribution. I. Musiałkowska and M. Wiśniewski (2017) point out a strong increase in the amount of the country's own financial contribution since 2014. This amount remains stable (at 3-4.5 billion PLN annually).

#### 4. Conclusion

Based on the analyses presented in the paper it is not possible to state univocally whether the change in local government units' potential for contracting debt was connected with the use of EU funds. At the same time, no definite conclusion can be made as to the relationship between the rate of absorption of EU funds by local government units and individual debt ratios. The existence of new limits on incurring debt may limit future absorption capacity of local governments. This may be especially the case with the most active gminas which incurred liabilities for implementation of EU-funded investments. The necessity to repay credits will reduce their potential for undertaking, executing and financing new investment projects. There is also a concern of the so-called debt roll-over, i.e. incurring new liabilities to repay the previous ones, which contrary to what is widely believed is not uncommon. Incurring new debt to repay the existing debt is a serious problem, and its scale is significantly increasing.

Since Poland was incorporated into the structures of united Europe, local government units have become the biggest beneficiaries of EU assistance, with their dynamically increasing debt incurred mainly for implementation of EU-funded investment projects. The success of Polish local governments in using these funds in both previous programming periods should not disguise increasing absorption problems. With the existing legal regulations, gminas' increasing debt made it more and more difficult to obtain repayable credits, which may significantly limit further investment activity.

For local government units, securing and effectively absorbing EU structural funds is on the one hand a significant organisational and financial challenge, while on the other hand – a chance for boosting development processes. Thus, applications for new EU-funded projects will require accumulation of a sufficient pool of own revenue or skilful management of debt.

Of course, this study does not constitute a comprehensive proposal to resolve emerging dilemmas and doubts. The author hopes that the text can be an inspiration for further research into issues related to the co-financing of public investment by EU funds. Undoubtedly, further research should be carried out. Research into the diversification of debt refinancing from various perspectives, for example due to the level of wealth of local government units, may be extremely interesting.

## References

- [1] Bachtler J. and Ferry M. (2015). Conditionality and the performance of European Structural Funds: a principal-agent analysis of control mechanisms in European Union cohesion policy. *Regional Studies*, vol. 49, iss. 8, pp. 1258-1273.
- [2] Dellmuth, L.M. (2011). The cash divide: the allocation of European Union regional grants. *Journal of European Public Policy*, vol. 17, iss. 7, pp. 1016-1033.
- [3] GUS (2018). [online]. [cit.2018-02-22]. Available at: <https://bdl.stat.gov.pl/BDL/dane/podgrup/tablica>.
- [4] Jurewicz, D. (2016). Dług samorządu – bodziec czy bariera absorpcji środków europejskich? (Debt as a Factor of Local Development of Reactivated Local Authorities). *Ruch Prawniczy, Ekonomiczny i Socjologiczny*, vol. LXXVIII, iss. 2, pp. 231-249.
- [5] Katsarova, I. (2013). The (low) absorption of EU Structural Funds. *Library of the European Parliament* [online]. [cit.2018-02-26]. Available at: <http://www.europarl.europa.eu/eplibrary/The-low-absorption-of-EU-Structural-Funds.pdf>.
- [6] Kornberger-Sokołowska E. (2015). *Problemy pozyskiwania środków unijnych przez polskie jednostki samorządowe (Problems of obtaining EU funds by Polish local government units)*, [online]. [cit.2018-02-22]. Available at: <https://www.nik.gov.pl/plik/id,1567.pdf>.
- [7] Korombel, A. (2012). Enterprise Risk Management in Practice of Polish Small Business - Own Research Results. In *Business and Management'2012. The 7th International Scientific Conference. Selected Papers. May 10-11, Vilnius, Lithuania*, vol. 2, pp. 1137-1143.
- [8] Korolewska, M. and Marchewka-Bartkowiak, K. (2011). Indywidualny wskaźnik zadłużenia samorządów terytorialnych (Local government debt indicator in Poland). *Studia BAS* No. 21(113), pp. 1-4.
- [9] Ławińska, O. (2016). Planning and implementation of infrastructure investments financed from EU funds in Czestochowa in 2010-2015. In *International Conference*

- on *European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 546-554.
- [10] Medve-Bálint, G. and Bohle, D. (2016). Local Government Debt and EU Funds in the Eastern Member States: The Cases of Hungary and Poland, *MAXCAP Working Paper Series*, No. 33, pp. 1-29.
- [11] Ministry of Finance (2018). [online]. [cit.2018-02-22]. Available at: <https://www.mf.gov.pl>.
- [12] Mohl, P. and Hagen, T. (2010). Do EU structural funds promote regional growth? New evidence from various panel data approaches. *Regional Science and Urban Economics*, vol. 40, iss. 5, pp. 353-365.
- [13] Musiałkowska, I. and Wiśniewski, M. (2017). Fundusze europejskie w finansowaniu rozwoju regionalnego i lokalnego przez samorząd terytorialny w Polsce (European Union funds for regional and local development in Poland). *Studia BAS*, No. 1(49), pp. 87-107.
- [14] Mynarzova, M., Kana, R. and Okręglička, M. (2016). Selected Aspects of Public Support for Small and Medium-Sized Enterprises in European Union Through the Prism of Block Exemption Regulation. In *1st International Conference Contemporary Issues in Theory and Practice of Management (CITPM 2016)*, Czestochowa, Poland, pp. 294-301.
- [15] Parlińska, A. (2014). Zadłużenie samorządów gminnych w Polsce w latach 2005-2012 (Municipal government debt in Poland in the years 2005-2012). *Nierówności Społeczne a Wzrost Gospodarczy*, nr 40 (4/2014), pp. 191-200.
- [16] Rivenbark, W.C., Roenigk, D.J. and Allison, G.S. (2010). Conceptualizing Financial Condition In Local Government. *Journal of Public Budgeting, Accounting & Financial Management*, vol. 22, iss. 2, pp. 149-177.
- [17] Satola, Ł. (2016). Wykorzystanie funduszy Unii Europejskiej na inwestycje komunalne a ograniczanie zadłużenia samorządów (The use of European Union funds for municipal investments and limiting debt of local governments). *Polityki europejskie, finanse i marketing*, No. 15 (64), Zeszyty Naukowe Szkoły Głównej Gospodarstwa Wiejskiego w Warszawie, pp. 139-148.
- [18] Report on public budget execution for the period from January 1 to December 31, 2014. Information on the execution of budgets of local government units (2015). Rada Ministrów, Warszawa.
- [19] Report on public budget execution for the period from January 1 to December 31, 2015. Information on the execution of budgets of local government units (2016). Council of Ministers, Warsaw.
- [20] Report on public budget execution for the period from January 1 to December 31, 2016. Information on the execution of budgets of local government units (2017). Council of Ministers, Warsaw.
- [21] Sierak, J. (2016). *Analiza i ocena sytuacji finansowej gminy – wynik finansowy i zadłużenie (Analysis and assessment of the financial situation of the community - financial result and indebtedness)*. [online]. [cit.2018-02-23]. Available at: <http://saf.ews21.pl/download/lectures/0/000/000/005/wyklsierak.pdf>.
- [22] Ustawa z 27 sierpnia 2009 r. o finansach publicznych (Act on Public Finance), unified text: Journal of Laws of 2017, item 1077.

## **Risk of Involvement of Mature Companies in the Cluster Cooperation – Results of Research Conducted in the SME Sector in Selected EU Countries**

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### **Abstract**

*The risk of running a business in EU is a stable element of the functioning of each kind of enterprise. It applies to both enterprises operating independently on EU market and those that conduct cooperation within clusters. The cooperation strategy opens up new horizons for the enterprises that cooperate in achieving competitive advantage. The main aim of the paper is to present the areas of risk connected with engagement in cluster cooperation by mature enterprises from selected EU countries. The questionnaire survey was conducted in 2016 on a group of 114 Polish and Slovak enterprises. The research group consists of mature enterprises that operate on the market for more than 10 years, are characterized by a stable increase in revenues and financial liquidity, and therefore have a determined market position. Mature companies have features that allow them to manage risk efficiently, and from the other side, they have experience in different forms of cooperation with stakeholders. The study uses statistical methods that allow to analyze the level and type of business risk of mature enterprises in the SME sector in selected EU countries.*

**Keywords:** cluster cooperation, EU, mature companies, risk in SME sector

**JEL Classification:** G32, M21, C38, P13

### **1. Introduction**

Cluster policy in the European Union is one of the directions of boosting competitiveness of Europe. It is a strategic priority of the European Commission, which is implemented in all member states and involves creation of appropriate conditions for the development of innovations and entrepreneurship through supporting and developing the concept of cluster cooperation (Frankowska, Myszak, Jedliński, 2016; Havierniková, Kordoš, Vojtovič, 2016). By participating in these types of initiatives, individual enterprises can become more competitive, and enterprises participating in cluster cooperation can achieve greater benefits compared to individual organisations. This is because the characteristic feature, and the main benefit of clusters, is access to much more resources (Porter, 1998). However, cluster initiatives not only ensure advantage to individual enterprises, a region or country, but they are



also one of the factors contributing to overall improvement of the quality of business environment (Matveev et al., 2016; Staničková, 2014).

Clusters have become an inseparable part of economic growth and strategy for building EU member states. As publications show, an environment for cluster policy has been created in Poland and Slovakia, however it is worth finding out how potential participants of these networks assess the risk of participation in this type of cooperation.

The main aim of the paper is to present the areas of risk connected with engagement in cluster cooperation by mature enterprises from selected EU countries. Inferences were made based on the findings of own survey research conducted in 2016 on a group of mature enterprises carrying on business activity in Poland and those carrying on business activity in Slovakia.

## **2. Literature Review – Risk and Cooperation of Enterprises**

Management of enterprises involves decisions in the conditions of uncertainty, taking into account the risk connected with carrying on business activity (Myšková, Doupalova, 2015; Ławińska, 2016). Effectiveness of activities and management of an enterprise depend on the ability to predict, readiness for changes, speed of reaction to changes, and the ability to take advantage of emerging chances. Thus, risk management is a precondition for an enterprise's survival and success (Lemańska-Majdzik, Ivanová, 2017). There are a number of factors that impact the activity of an enterprise, determining risk management in line with the key processes and goals of an enterprise. They include: strategic risk management, operational risk management, financial and credit risk management, market risk management and project risk management (Havierníková, Okręglicka, Klučka, 2016, pp. 103-109). Risk management practice and risk management procedures create specific actions that determine decision-making and strategies in an enterprise, such as: creation of organisational elements and communication in risk management, development of organisational culture as a factor supporting risk that becomes a source of an organisation's competitive advantage or establishment of mechanisms and systems of early warning about negative consequences of risky activities (Klučka, 2010, p. 33). Risk management is a process that constantly monitors risk during running the business activity of a company and supports managers in decision-making with regard to the order of priority actions that have to be taken in order to implement the adopted strategy in a given business environment (Lemańska-Majdzik, Ivanová, 2017). Risk is an inseparable element of every economic activity. Risk taking and competitive actions are important elements of entrepreneurship orientation which have a significant impact on management of small and medium-sized enterprises (Ključnikov, Belás, Smrčka, 2016). Risk is defined as a possibility of the occurrence of an event which can have a negative or positive impact on the goals adopted in an organisation (Korombel, 2012). Risk can have a dangerous impact on a business process (Marhavišas, Koulouriotis, 2012). As was noticed by Kin (2014), it cannot be completely eliminated in the process of the functioning of a company. Even with an effective system of risk management, risk will not disappear. It is however possible to effectively manage a company in order to positively impact the aspect of coping with risk. Studies reveal that most micro-, small and medium-sized enterprises notice the existence of risk in economic activity, with Slovak entrepreneurs showing higher level of risk awareness compared with Polish ones (Okręglicka, Havierníková, 2017).

One of the characteristic features impacting efficient management of an enterprise is company maturity, which enables improvement of an organisation's abilities (Hammer, 2007), including better performance of processes in an organisation. A stable increase in revenues or high financial liquidity, which are typical of mature companies that have not recorded decreases yet (Mohr, pp. 25-26), allow companies to achieve a market position and impact their competitive

advantage. Mature enterprises, apart from financial stabilisation or capabilities of risk compensation, are characterised by experience which determines implementation of goals and projects (Fang, David, 2015).

A company's competitive position may also be strengthened through participation in international cooperation. Cooperation allows enterprises to achieve better effects of their activity, thanks to increasing the potential of organisations, as well as improving the functioning of cooperating companies. This type of activities enable enterprises to improve their competitive positions compared to the other enterprises in the sector (Tomski, 2011). It also allows participants to achieve goals that are not available for independent individual enterprises. According to Child and Faulkner (1998), achievement of market success is preceded in this case by mutual trust between cooperating partners and adoption of a common strategy of action for an organisation. An effect of cluster activities can be new employment opportunities, new products and services, new companies, new research and development projects, new patents and other issues connected with economic development and market competition (Štverková, Mynarzová, 2017). Diatczyk (2012, p. 40) stresses that the main advantages of the functioning as part of clusters also include, among other things, reduction of the risk level connected with business activity, which is important from the perspective of conducting business activity and competitive markets.

Clusters are a phenomenon that is a product of market needs, therefore cluster cooperation among enterprises has a positive impact not only on the effectiveness of the activities of the cooperating organisations themselves, but also on the development of regions through making cooperation and knowledge transfer more common among local entrepreneurs (Hiroyuki, Nishimura, 2015; Casanueva, Castro, Galán, 2013). Moreover, clusters have a positive impact on structural changes, economic situation, including the level of innovativeness and increase in a region's entrepreneurship as well as better use of the innovation potential of small and medium-sized enterprises. Further, well-functioning clusters reduce the gap between industry and scientific environment (Matveev et al., 2016; Frankowska, Myszak, Jedliński, 2016). Burrus et al. (2018) stress that cooperating enterprises (symbiotic relationship between enterprises) that innovate maximise profits and meet expectations of their customers, become more confident about future expectations and, at the same time, significantly lower the risk connected with running business activity.

### **3. The Mature Companies in the Cluster Cooperation**

According to Piątkowski (2015), participation in clusters enables entrepreneurial processes, which as a consequence enables achievement of a bigger competitive advantage over enterprises which do not cooperate in the cluster initiative. It is particularly important for smaller companies, which have much less resources or limited access to new markets. It turns out that cooperation and at the same time competition among the enterprises in a cluster is a desirable mechanism for improving competitiveness of EU countries.

#### **3.1 Methodology**

The main aim of the paper is to present the areas of risk connected with engagement in cluster cooperation by mature enterprises from selected EU countries. Survey research was conducted in 2016 in Poland and Slovakia among entrepreneurs who know the principle of risk management and cluster cooperation, and declare maturity of their companies. For the purpose of the survey, mature enterprises are regarded as those that declare a good market

position, stable increase in revenue, high financial liquidity, regular profits and have been conducting economic activity for over 10 years.

During selection of enterprises for the research, judgemental sampling was used. As a result, 114 enterprises were surveyed: 75 Polish and 39 Slovak mature companies from the SME sector.

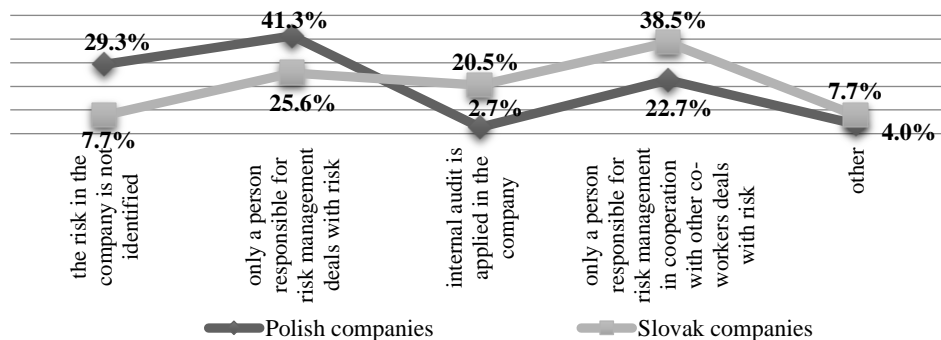
The research tool was a survey questionnaire with close-ended questions divided into three parts covering the main research problem. Participants of the research were entrepreneurs owners of the enterprises surveyed or main managers of companies. For the purpose of this paper, only a selected research area related with risk perception in the aspect of enterprises' engagement in cluster cooperation was analysed.

During analysis of data collected in two selected EU countries, descriptive statistics and non-parametric correlations between variables using 5-point Likert scale were used based on the software *STATISTICA 12.5 PL*.

### 3.2 Own Research Results

The Polish and Slovak mature enterprises surveyed declared that in their company risk is most often identified by a person responsible for that area (respectively 41.3% and 25.6% responses) and by a team of employees responsible for risk management in an enterprise (respectively 22.7% and 38.5% responses). Only 3% of Polish and as many as 20.5% of Slovak enterprises declared that an external audit is used in their companies in the process of risk identification and management. Worryingly, almost 30% of the Polish enterprises surveyed do not identify risk in the company (Figure 1). Risk of a company's business activity is, as the research shows, better recognised by Slovak companies, as demonstrated by entrepreneurs' declarations.

**Figure 1. Ways of Risk Identification in Polish and Slovak Mature Companies**



Source: own elaboration

Based on the research, it is possible to indicate selected risk areas connected with enterprises' engagement in cluster cooperation, where the risk level is the highest according to respondents. The Polish enterprises surveyed indicated risks connected with market competition, loss in the number of customers, company location, quality, and employees' qualifications and skills. As for the Slovak enterprises surveyed, engagement in a cluster initiative is usually connected with higher risk in the case of loss of part of customers, market competition, cooperation with business partners, quality and taxation of economic activity (Table 1).

**Table 1: Level of Risk Connected with Engagement in Cluster Cooperation, According to Polish and Slovak Mature Enterprises**

Selected risk areas	Polish companies		Slovak companies	
	Mean*	Stand. dev.	Mean*	Stand. dev.
1 Competition	<b>3.226</b>	1.29002	<b>3.333</b>	1.51020
2 Partners	2.213	1.57937	<b>3.000</b>	1.50438
3 Taxation	2.586	1.37638	<b>3.025</b>	1.49538
4 Enterprise location	<b>2.613</b>	1.46022	2.538	1.58689
5 Infrastructure	2.413	1.39588	2.461	1.57022
6 Availability of raw materials	2.053	1.41319	2.256	1.72776
7 Transportation and warehousing	2.253	1.38616	2.025	1.67783
8 Machines and equipment	2.533	1.51865	2.564	1.69822
9 Production	2.053	1.70764	2.436	1.63506
10 Quality	<b>2.680</b>	1.65350	<b>2.871</b>	1.64124
11 Life cycle of an enterprise	1.973	1.29420	2.333	1.64370
12 Employees' qualifications and skills	<b>2.680</b>	1.42525	2.718	1.74641
13 Staff-related risk	2.506	1.34941	2.795	1.64124
14 Slow-down in the company's development	2.213	1.44534	2.795	1.37992
15 Loss/reduction in the number of customers	<b>2.907</b>	1.40629	<b>3.590</b>	1.46392

\* Min = 0.0; Max = 5.0

Source: own work

In the survey, Polish enterprises included 26 micro-companies, 33 small companies and 16 medium-sized enterprises, whereas Slovak ones included 16 micro-companies, 15 small companies and 8 medium-sized enterprises. Risk of cluster activity depends, among other things, on the industry in which companies operate, therefore it is worth indicating that the enterprises surveyed were mainly engaged in trade (41% of responses) or were industrial companies (over 26% of responses).

**Table 2: Gamma Correlation Between the Size of an Enterprise and Risk in Selected Areas in Connection with Participation in a Cluster**

Selected risk areas	Size of companies	
	Polish companies	Slovak companies
1	0.18035	0.10553
2	<b>0.39581**</b>	<b>0.07179**</b>
3	0.21237	-0.00495
4	0.14094	0.01449
5	<b>0.31684**</b>	-0.02538
6	<b>0.33608**</b>	<b>0.14356**</b>
7	<b>0.29891**</b>	0.20494
8	<b>0.30866**</b>	<b>0.30189**</b>
9	<b>0.27538**</b>	0.12219
10	0.13697	0.03667
11	<b>0.36657**</b>	0.14988
12	0.06967	-0.22705
13	<b>0.23393**</b>	<b>0.14425**</b>
14	0.09140	-0.05793
15	-0.01437	-0.18635

\*\*Gamma rank correlation (p-value<0.05)

Source: own work

Statistical analysis has shown that there is a positive statistical relationship ( $p\text{-value} < 0.05$ ) in both the groups analysed between the selected risk areas and the size of an enterprise. It has been found out that in the group of Polish enterprises concerns about growing risk connected with participation in a cluster initiative increase with an increase in the number of employees in an enterprise. The bigger the company, the higher the perceived risk in the area of competition ( $\gamma=0.29748$ ), attracting partners ( $\gamma=0.39581$ ), infrastructure ( $\gamma=0.31684$ ), availability of raw materials ( $\gamma=0.33608$ ), transportation and warehousing ( $\gamma=0.29891$ ), access to machines and equipment ( $\gamma=0.30866$ ) and production ( $\gamma=0.27538$ ), an enterprise's life cycle ( $\gamma=0.36657$ ), and staff-related risk ( $\gamma=0.23393$ ). In the group of Slovak enterprises, concerns about growing risk connected with participation in a cluster initiative increase with an increase in the number of employees in the following risk areas: attracting partners ( $\gamma=0.07179$ ), availability of raw materials ( $\gamma=0.14356$ ) and machines and equipment ( $\gamma=0.30189$ ), and human factor related risk ( $\gamma=0.14425$ ) (Table 2).

#### 4. Conclusion

The research conducted on a group of Polish and Slovak mature enterprises in 2016 enabled identification of the areas of risk connected with engagement in a cluster initiative. Although the research covered mature enterprises with market experience, concerns about participation in cluster cooperation were indicated in both the groups surveyed. In the selected EU countries, entrepreneurs indicated similar areas of risk in connection with their engagement in a cluster initiative, however in Slovakia the level of this risk, according to those surveyed, is higher. The analysis has also shown a positive statistical relationship, which indicates that in selected areas the risk increases as the number of employees in the analysed enterprises in Poland and Slovakia increases.

The novelty in the research is, according to the authors, comparing the level of risk in selected areas in connection with engagement in cluster initiatives in two EU countries, in a group of mature enterprises that have been existing on the market for at least 10 years and declare stable revenue and a good competitive position.

The limitations of the research are relatively small research groups in selected EU countries. According to the authors, it is worth undertaking representative research in the future, including in other EU countries. Comparison of the collected findings may help indicate recommendation for the future cluster policy in the EU which is a priority for boosting competitiveness of Europe.

#### Acknowledgements

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#### References

- [1] Burrus, R.T., Graham, J.E. and Jones, A.T. (2018). Regional innovation and firm performance. *Journal of Business Research* [online]. [2018-01-05]. Available at: <https://www.sciencedirect.com/science/article/pii/S014829631730543X?via%3Dihb>

- [2] Casanueva, C., Castro, I. and Galán, J.L. (2013). Informational networks and innovation in mature industrial clusters. *Journal of Business Research*, vol. 66, iss. 5, pp. 603–613.
- [3] Child, J. and Faulkner, D. (1998). *Strategies for Cooperation. Managing Alliances, Networks and Joint Ventures*. Oxford: Oxford University Press.
- [4] Fang, Y. and David J. (2015). The chief executive officer's compensation and firm's research and development investments: A comparison between young and mature firms, *International Journal of Business. Accounting, & Finance*, vol. 9, iss. 2, pp 123–136.
- [5] Frankowska, M., Myszak, J. and Jedliński, M. (2016). *Cluster policy in Poland. V4 cluster policies and their influence on the viability of cluster organisations* [online]. [cit.2018-02-12]. Available at: [http://klastr-portal.cz/Resources/Upload/Home/ke-stazeni/v4clusterpol/v4clusterpol-reports/v4cp\\_cluster-policy\\_poland.pdf](http://klastr-portal.cz/Resources/Upload/Home/ke-stazeni/v4clusterpol/v4clusterpol-reports/v4cp_cluster-policy_poland.pdf).
- [6] Hammer, M. (2007). The Process Audit. *Harvard Business Review*, vol. 85, iss. 4, pp. 111–123.
- [7] Havierníková, K., Kordoš, M. and Vojtovič, S. (2016). *Cluster policy in Slovakia. V4 cluster policies and their influence on the viability of cluster organisations* [online]. [cit.2018-02-22]. Available at: Available online: [http://klastr-portal.cz/Resources/Upload/Home/ke-stazeni/v4clusterpol/v4clusterpol-reports/v4cp\\_cluster-policy\\_slovakia.pdf](http://klastr-portal.cz/Resources/Upload/Home/ke-stazeni/v4clusterpol/v4clusterpol-reports/v4cp_cluster-policy_slovakia.pdf).
- [8] Havierníková, K., Okręglicka, M. and Klučka, J. (2016). *Theoretical and Methodological Issues of Risk Management in Small and Medium-Sized Enterprises*. Wien/Berlin: Mercur Verlag, pp. 103–109.
- [9] Hiroyuki, O. and Nishimura, J. (2015). Local Management of National Cluster Policies: Comparative Case Studies of Japanese, German, and French Biotechnology Clusters. *Administrative Sciences*, vol. 5, iss. 4, pp. 213–239.
- [10] Kin, A. (2014). Zarządzanie ryzykiem w przedsiębiorstwach MŚP a kryzys finansowy. *Research Papers of the Wrocław University of Economics*, vol. 341, pp. 54–61.
- [11] Ključnikov, A., Belás, J. and Smrčka, L. (2016). The role of risk-taking and competitive aggressiveness in management of SMEs. *Polish Journal of Management Studies*, vol. 14, no. 1, pp. 129–139.
- [12] Klučka, J. (2010). Enterprise Risk Management and Economic Crisis in the Slovak Republic, In: *Management 2010*. Belgrade: Union University.
- [13] Korombel, A. (2012). Enterprise Risk Management in Practice of Polish Small Business – Own Research Results. In *The 7<sup>th</sup> International Scientific Conference “Business and Management”*. Vilnius: VGTU Publishing House “Technika”, vol. 2, pp. 1137–1143.
- [14] Lemańska-Majdzik, A. (2017). The barriers of the business activity of micro, small and medium-sized enterprises in Poland in the aspect of business environment. In Majtán Š. (ed.), *Aktuálne Problémy Podnikovej Sféry 2017*. International Scientific Conference Current Problems of the Corporate Sector 2017. Bratislava: Vydavateľstvo EKONÓM, pp. 650–659.

- [15] Lemańska-Majdzik, A. and Ivanová, E. (2017). Identification of the level of business risk of mature enterprises of the SME sector in Poland and Slovak Republic. In *4<sup>th</sup> International Multidisciplinary Scientific Conference on Social Science & Arts, SGEM 2017*. Sofia: STEF92 Technology Ltd., Book 1, Modern Science, Vol. V, Business and Management, pp. 481–488.
- [16] Ławińska, O. (2016). Public Consultation in Management of Technical Infrastructure Investments in Czestochowa in 2010-2015. In Okręglička, M., Gorzeń-Mitka, I., Lemańska-Majdzik, A., Sipa M. and Skibiński A. (eds.), *Proceedings of the 1<sup>st</sup> International Conference Contemporary Issues in Theory and Practice of Management CITPM 2016*. Czestochowa: Wydawnictwo Wydziału Zarządzania Politechniki Czestochowskiej, pp. 268–275.
- [17] Marhavidas, P.K. and Koulouriotis, D.E. (2012). Developing a new alternative risk assessment framework in the work sites by including a stochastic and a deterministic process: A case study for the Greek Public Electric Power Provider. *Safety Science*, vol. 50, pp. 448–462.
- [18] Matveev, Y.V., Trubetskaya, O.V., Lunin, I.A., Rousek, P. and Kopnov, V.A., (2016). Clusters and their Role in Economic Development. *International Journal of Economic Perspectives*, vol. 10, iss. 3, pp. 113–125.
- [19] Mohr, A. (2005). *Managing Business Growth: Get a Grip on the Numbers That Count*. USA/Canada: International Self-Counsel Press Ltd.
- [20] Myšková, R. and Doupalová, V. (2015), Approach to Risk Management Decision-Making in the Small Business, International Scientific Conference: Business Economics and Management (BEM 2015). *Procedia Economics and Finance*, vol. 34, pp. 329–336.
- [21] Okręglička, M. and Havierníková, K. (2017), Assessment of business environment risk level in small and medium-sized enterprises in Poland and Slovakia. In *4<sup>th</sup> International Multidisciplinary Scientific Conference on Social Science & Arts, SGEM 2017*. Sofia: STEF92 Technology Ltd., Book 1. Modern Science. Vol. 4. Economics and Tourism, pp. 73–80.
- [22] Piątkowski, M. (2015). Integration of Enterprises on the Example of Clusters in Poland. *Procedia - Social and Behavioral Sciences*, vol. 181, pp. 313–320.
- [23] Skrzypek, E. (2014). Dojrzałość jakościowa organizacji w świetle teorii i doświadczeń organizacji. *Marketing i Rynek*, vol. 5, pp. 579–588.
- [24] Staničková, M. (2014). Competitiveness Factors in Regional Growth: the Case of Central and Eastern European Countries. In Honová, I. et al. (ed.). *Proceedings of the 2<sup>nd</sup> International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava pp. 634-643.
- [25] Štverková, H. and Mynarzová, M. (2017). Cluster Initiatives in the Context of the BEE model. *Forum Scientiae Oeconomia*, vol. 5, pp. 59–69.
- [26] Tomski, P. (2011). Paradygmat hiperdynamiki otoczenia a współdziałanie gospodarcze współczesnych przedsiębiorstw. *Zeszyty Naukowe Politechniki Czestochowskiej. Zarządzanie*, vol. 1, pp. 7–18.

## **E-Government as an Anti-Corruption Strategy in EU Countries**

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### **Abstract**

*Governments around the world are recognizing the power of the use of information and communication technologies (ICT), the utilization of digitized inter-connective communication systems linking governmental organizations and its stakeholders. European Union's member countries have gone a long journey in this area in the last two decades. One of the consequences of the implementation of ICT in public administration is also the restriction of the public official's discretion, thus also reduction of corruption in the public sector. This paper is focus on the potential impact of e-Government on the level of corruption in the European Union's member countries. Specifically, this paper examines the impact of the use of ICT represented by the E-government Development Index on the evaluation of the level of corruption in the public sector represented by the Corruption Perception Index in 28 member countries of the European Union.*

**Keywords:** *corruption, e-Government, e-Governance, e-service, European Union, public administration, public services*

**JEL Classification:** *H00, H11, H41, F60*

### **1. Introduction**

Impact, especially of bureaucratic corruption, on the economic performance of countries has been a favourite topic of numerous studies and debates for decades. The strong interaction between politicians, officials and businessmen, aiming to obtain illegal economic rents from public activities characterizes in many countries the decision-making process on public investment and reduces their economic performance. According to numerous studies (Jain, 2001; Kimbro, 2002; Kim, 2007), corruption has exactly quantifiable negative impact on economic efficiency and economic growth of the state.

A feasible way to reduce corruption, especially in the public sector, may be reducing the interactions between officials and the public. This can be achieved by means of e-government. E-government can ensure not only providing more information to the public, but also remove the discretion of public officials (Mistry, 2012; Mistry, Jalal, 2012; Seo, Mehedi, 2016). European Union countries are very positively evaluated in terms of the implementation of information and communication technologies (ICT) in the field of public administration in recent times (United Nations, 2016).

The aim of this paper is to prove or disprove the relationship between the level of corruption and the degree of utilization of e-government in the European Union's member countries. The paper observes the relationship between changes in the use of e-government and changes in the level of corruption in European countries during the period from 2003 to 2016.



### ***1.1 Restriction of Corruption Through the Implementation of Information and Communication Technologies in the Field of Public Administration***

Transparency International (2016), international non-profit organization which function is to map the status of corruption and to contribute actively with its operation to corruption limitation, defines corruption similarly as „*misuse of a public function for the purpose of private enrichment*“.

The corruption is often called as a „sand in wheels“ of economies because of its negative economic consequences. The negative effects of corruption on foreign investment are shown by Shleifer and Vishny (1993). In addition, corruption increases transaction costs, impedes the development of a market economy, undermines the system of free markets by increasing the degree of uncertainty and reduces government revenues while raising its spending (Rose-Ackerman, Palifka 2016). Corruption leads also to a misallocation of resources, particularly when the investment of public funds and approval of private investments are decided not on the basis of economic or social value of a project, but rather on the potential revenue that public officials may expect to receive from their decisions (Jain, 2001).

Some studies identified the potential role of E-government in reducing corruption. E-government eliminates the scope for bribing by elimination of intermediary services and it allows for citizens to arrange their transactions by themselves (Singh, G. et al., 2010). Researches carried out that factors supporting corrupt practices in public administration officials, such as monopoly power, discretionary powers or lack of accountability are mitigated by the existence of a functioning legal system and greater transparency (Mistry, 2012). These studies agree that the increased use of E-government can weaken the factors causing corruption and result in a reduction of monopoly power by officials and ultimately lead to greater transparency in public administration functions (Kim, 2007; Mistry, 2012). Mentioned authors in principle agree that an important role in the anti-corruption strategies of individual states play is by providing easy access to information for all citizens through the use of e-government approaches and initiatives. This may result in greater transparency, which limits the possibility of a public official to accept or even demand a bribe.

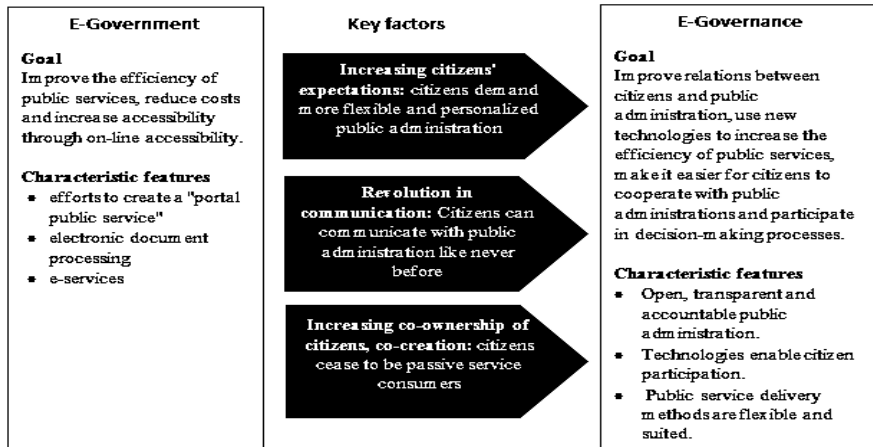
#### ***1.1.1 The Transition from the e-Government to the e-Governance***

A massive use of ICT in public administration, public administration and communication with citizens has taken place over the last two decades not just in Europe. This is reflected in the way of how public services are provided. The United Kingdom, Netherlands, Estonia or the northern European countries have long been striving for the widest possible expansion of digital public services. Estonia is a well-known pioneer in e-elections. The way to use the electoral process with a digital ID chip is being used by Estonia till today. Some countries use ICT "only" to raise awareness of their citizens or deliver better quality public services. However, some countries are even further and thanks to ICT are their citizens directly involved in decision-making and control processes of public administration. Therefore, it is possible to distinguish the concepts of e-Government and e-Governance.

The concept of ***e-Government*** could be define as the use of ICT by public institutions to ensure the exchange of information with citizens, private organizations and other public institutions in order to increase the efficiency of the internal functioning and to provide fast, affordable and quality services (Lidinský, 2008). It should be added that ICT can significantly improve the quality of public services provided. The provided e-service is provided with the help of technology, the contact between the customer and the public administration is not face to face, the e-service is self-service, and there is no need for another person to perform the service. The

**e-Governance** approach means the use of ICT in public administration to improve the awareness and quality of public services by involving citizens in decision-making processes and by creating more responsible, transparent and efficient government (Budd, Harris, 2009). E-Governance is focused on democratic processes. The government as a co-ordinating body operates in a democratic system and citizens and other subjects follow their own interests and express their views in a formal system based on democratic principles. The schema of transition from e-Government to e-Governance with the fundamental characteristics and goals of each approach is depicted on the Figure 1.

**Figure 1: The Transition from e-Government to e-Governance**



Source: own elaboration

European countries are developing a series of e-Government and e-Governance initiatives to develop public administration. E-Government initiatives support the delivery of e-services, e-Governments are geared towards the development of democratic dialogue between the government and the public, businesses and non-governmental organizations. Over the last decade, large EU funds have been devoted to e-Gov- projects, but many of these projects have been implemented only partially or not at all. Examples of the most common barriers to the practice of e-Gov- ideas are financial barriers, digital gaps, high IT access costs, insufficient IT education of inhabitants, information labyrinth or fear of data misuse (Oakley, 2002).

## 2. Problem Formulation and Methodology

In order to verify the existence of a relationship between the utilization rate of e-Government and level of Corruption, established indexes will be analyzed. Specifically, the E-government Development Index and Corruption Perception Index will be used. Analyzed time series is the period from 2003 to 2016. This is the longest time series, which could be analyzed. Year 2003 was the first and 2016 was the last year of calculation of the E-government Development Index, the indicator of the level of E-government in a country.

### 2.1 Model and Data

**The Corruption Perception Index (CPI)** has been published by Transparency International (TI) since 1995. It is an index that is based on corruption perceptions of respondents, which are domestic and foreign entrepreneurs, analysts and representatives of the professional public

in the evaluated countries. As a result, the CPI takes values in the interval from 0 to 100, where 0 is highly corrupt country and value of 100 indicates a country without corruption. The sample of examined countries is changed over time. For example, the index of 1995 included 41 countries, and in the last survey in 2016, there were already 176 countries evaluated (Transparency International, 2003, 2016).

**The E-Government Development Index (EGDI)** is used to estimate the level of E-government in a country. This measurement is based on a survey compiled in cooperation between United Nation's Department of Economic and Social Affairs and Civic Resource Group, consulting firm providing technology solutions in the field of E-government. The EGDI reflects how a country uses an information technology to promote access and inclusion of her inhabitants. EGDI has been published since 2003 and takes values in the interval  $<0; 1>$ , where 1 represents the high level of usage of E-government and a value of 0 means a low rate of application of E-government in public administration. Of the 193 countries surveyed in 2016, the United Kingdom, followed by Australia and Korea, ranked first in the last rank of the EGDI. There are significant differences in average EGDI values across continents. The lowest value for the long-term is the average of the countries of the African continent (0.2882), while the highest is the average value of European countries (0.7241) (United Nations, 2003, 2016).

Verification of the relationship between E-government and corruption will be carried out by using a simple linear regression analysis and correlation coefficient. Correlations between defined variables will be verified by the value of the Spearman correlation coefficient ("the correlation coefficient"). The calculation of the correlation coefficient will be conducted by using statistical software STATISTICA, version 1.10. The significance level established for the correlation analysis is 0,05. The null hypothesis defines that the monitored variables are not in correlative relationship. Verification of this hypothesis is based on the subsequent comparison of the level of significance with a value (called p-value) which statistical software generates. Then we can also determine how tight the mutual correlation between the variables is. The correlation coefficient takes values between -1 and 1, inclusive. Values of the correlation coefficient close to value of -1, respectively 1, can describe a very strong mutual correlation relationship between the observed variables. It is also possible to distinguish the positive correlation relationship (or direct relationship) that occurs when the value of the correlation coefficient becomes positive. Or otherwise, we can specify a negative correlation relationship (or indirect relationship). First will be investigated relationship exists between EGDI and CPI in two-time periods (i.e. 2003-2016). Subsequently, analysis of whether there is a relationship between change in EGDI and change in CPI during the mentioned period will be done.

The following regression function was used to verify the relationship between the CPI and the EGDI. The function is based on the least squares method (Freund, Mohr, Wilson, 2010):

$$y = \alpha + \beta * x + \varepsilon \quad (1)$$

The parameter  $x$  denotes the independent variable, in this case the use of E-government (index EGDI) and the parameter  $y$  denotes the dependent variable, i.e. the level of corruption (CPI). The parameter  $\alpha$  determines the distance of intersection of the regression line with the y-axis (the value of the regression function for  $x = 0$ ). The parameter  $\beta$  is called the regression coefficient and shows the variation of the dependent variable value when the value of the independent variable changes. The symbol  $\varepsilon$  is the residual variance, which is a graphical representation of the distance of points from the regression line.

### 3. Problem Solution

Correlation coefficients for the variables are shown in the Table 1. The values identified using Statistica as statistically significant, are highlighted in bold. A positive correlation relationship was found among the variables CPI and EGDI in both years. There is a relationship between corruption and using E-government methods in the analyzed countries.

**Table 1: Correlation Matrix**

Variable	EGDI 2003	EGDI 2016	% change EGDI	CPI2003	CPI2016	% change CPI
<b>EGDI2003</b>	1,000000	<b>0,892045</b>	<b>-0,671026</b>	<b>0,861866</b>	<b>0,863523</b>	<b>-0,534131</b>
<b>EGDI2016</b>	<b>0,892045</b>	1,000000	-0,270675	<b>0,807577</b>	<b>0,796980</b>	<b>-0,541352</b>
<b>% change EGDI</b>	<b>-0,671026</b>	-0,270675	1,000000	<b>-0,511973</b>	<b>-0,528950</b>	0,255819
<b>CPI2003</b>	<b>0,861866</b>	<b>0,807577</b>	<b>-0,511973</b>	1,000000	<b>0,901920</b>	<b>-0,735140</b>
<b>CPI2016</b>	<b>0,863523</b>	<b>0,796980</b>	<b>-0,528950</b>	<b>0,901920</b>	1,000000	<b>-0,389711</b>
<b>% change CPI</b>	<b>-0,534131</b>	<b>-0,541352</b>	0,255819	<b>-0,735140</b>	<b>-0,389711</b>	1,000000

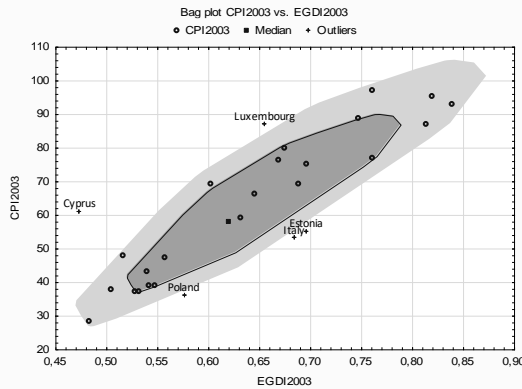
Source: own elaboration according to Transparency International (2003, 2016), United Nations (2003, 2016)

Bag plot was used for graphical interpretation of the examined variables. It is a generalized two-dimensional graph, which serves the graphic interpretation of statistical data. Points in the graph represent a combination of dependent and independent variables of individual countries. Dark -blue area (i.e. Bag) contains 50% of surveyed countries (between the first and third quartile) and dark- blue square represents the median value of the examined countries. Light blue exterior bag contains other rated states that achieved different values than countries in the dark blue field, but are not outliers. Outside of this area there are outliers that are shown in the chart with small stars. Bag plot also shows other characteristics of data displayed as the country's position within the evaluated countries, as well as the relationship between the evaluated variables indicated by the orientation of the bag (positive slope of bag indicates a positive relationship between the evaluated variables and negative slope of bag suggests the negative relationship).

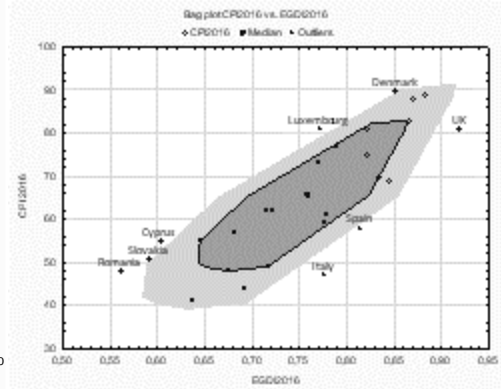
Figure 1 shows bag plot of EU countries that use the data from 2003. On the x-axis there is the EGDI in 2003 and on the y-axis, there is the CPI in 2003. As mentioned earlier, higher values of the EGDI indicate better readiness to use IT technology in the field of public administration and higher CPI values indicate less corruption in the country. Slope of the bag plot confirms the positive relationship between analysed variables. The year 2003 showed the impact of E-government at the level of corruption of evaluated countries. The bag plot illustrates several outliers of remote countries that are out of the evaluation of others in terms of the use of E-government or the assessment of the extent of corruption. There is not any significant separation of any country from others despite of the occurrence of several outlying values.

Figure 2 shows the same bag plot using data of 2016. Bag plot values achieved a positive slope again, which confirms the positive relationship between the variables also for year 2016. There are again some outliers that are identified in terms of the extent of corruption and the level of E-government differs from other countries in its group. For example in previous text already mentioned United Kingdom, which has the highest ranking of EGDI 2016 of all 193 evaluated countries.

**Figure 2: Bag Plot 2003**



**Figure 3: Bag Plot 2016**



Source: own elaboration according to Transparency International (2003, 2016), United Nations (2003, 2016)

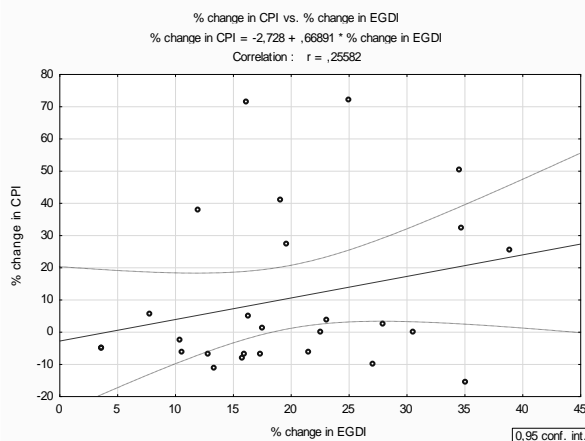
Lithuania recorded the most significant progress in the use of E-government in public administration in the reporting period. In the analysed years, Lithuania reached the level of the index EGDI 0,557 in 2003 and 0,775 in 2016, which means an increase of 39% in the level of usage of E-government in the country. In that country also the level of corruption was decreased by more than 25%. Also Croatia achieved a significantly better evaluation in EGDI in 2016. This country reached almost 35% improvement in the level of usage of E-government and level of corruption decreased by 32 % as well. Therefore it is possible to observe the same direction of the development of the examined variables in analysed period in many EU member states. But it is worth to mention that CPI 2016 index ratings in some countries are worse, despite the positive development of the EGDI 2016 index. Thus, increased use of ICT has not led to a reduction in corruption rates in all countries. As already mentioned above, corruption is a complex issue, and its causes vary considerably in the countries of origin.

We can use the following regression model to estimate changes in the rates of induced change in E-government in the country (Freund, Mohr, Wilson, 2010):

$$\Delta\text{Corruption} = \alpha + \beta * \Delta\text{E-government} + \varepsilon \tag{2}$$

Where  $\Delta\text{Corruption}$  is the change of the Corruption Perception Index between 2003 and 2016, and  $\Delta\text{E-government}$  is the change of the E-government Development Index in the same period.

Figure 3 is focused on how changes in the EGDI may affect changes in the CPI. Figure 3 shows the percentage change in the EGDI between 2003 and 2016 on the horizontal axis and the percentage change in the CPI between 2003 and 2016 on the vertical axis. This graph shows the evolution of the CPI and the EGDI during the sampling period. The linear regression line shows that not all countries with raised value of the EGDI recorded also simultaneously decrease of corruption. However, the linear regression line still has a slightly positive slope. It can be concluded that at constant conditions and other variables results with a one percent change in the index EGDI nearly 0.67% change in the CPI countries occurs in analysed period. In other words, improvement in the assessment of E-government in the country by 1%, leded to the improvement of corruption in the country by almost 0.67 % in analysed group of countries.

**Figure 4: Linear Regression Model for Variables Change in Years 2003-2016**

Source: own elaboration according to Transparency International (2003, 2016), United Nations (2003, 2016)

#### 4. Conclusion

The goal of this paper was to examine the existence of relationship between the corruption and usage of ICT and find an answer for the question, if changes in the utilization of these technologies lead to changes in the level of corruption in the EU member countries. For verification of this relationship, defined hypothesis which truth was confirmed by empirical models were stated. The positive impact of the E-government in reducing corruption in most of the countries was confirmed by using correlation and regression analysis. It has been shown that 1% percent increase in the index EGDI in the period of 2003-2016 caused the reduction of corruption (increase the value of the CPI) by 0.67 % in EU member countries.

It is necessary mention that the positive effect of E-government was not proved in all EU countries. This finding just supports the well-known fact that there are many possible roots of corruption. The corruption occurs in various areas of public administration and takes numerous forms. For this reason, e-Government is not a panacea for fighting corruption, which would be effective in all countries. It is also not possible to generalize the results of this paper for other periods and other groups of countries. The findings from the analysis, however, confirm the conclusions of numerous studies and consider the e-Government as a tool for reducing corrupt behaviour of officials in the public sector also in EU countries.

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#### References

- [1] Ardielli, E. (2016). Implementation of Good Governance Concept in the European Union Member Countries. In: Proceedings of the 3rd International Conference on European Integration 2016, Ostrava: VŠB - Technická univerzita Ostrava, pp. 28-36.
- [2] Budd, L. & Harris, L. (2009). E-governance: managing or governing? New York, NY: Routledge.
- [3] Halásková, M. & Halásková, R. (2014). The Role of Public Administration and Public Services in the European Administrative Area. In: Proceedings of the 2nd

- International Conference on European Integration, Ostrava: VŠB - Technická univerzita Ostrava, pp. 202-210.
- [4] Jain, A. K. (2001). Corruption: A review. *Journal of Economic Surveys*, 15(1), pp. 71-121. DOI 10.1111/1467-6419.00133.
- [5] Kim, C. (2007). A cross-national analysis of global E-government, *Public Organization Review*, 7(10), pp. 317-329. DOI 10.1007/s11115-007-0040-5.
- [6] Kimbro, M. (2002). A cross-country empirical investigation of corruption and its relationship to economic, cultural, and monitoring institutions: an examination of the role of accounting and financial statements quality, *Journal of Accounting, Auditing and Finance*, 17(4), pp. 325-349. DOI 10.1177/0148558X0201700403.
- [7] Lidinský, V. (2008). *eGovernment bezpečně*, Praha: Grada.
- [8] Mistry, J. J. (2012). The Role of eGovernance in mitigating corruption, *Accounting and the Public Interest*, 12(1), pp. 137-159. DOI 10.2308/apin-10287.
- [9] Mistry, J. J., Jalal, A. (2012). An empirical analysis of relationship between e-government and corruption. *The International Journal of Digital Accounting Research*, 12, pp. 145-176. DOI 10.4192/1577-8517-v12\_6.
- [10] Oakley, K. (2002). What is e-governance?, *e-Governance Workshop*, Strasbourg.
- [11] Rose-Ackerman, S. & Palifka, B. J. (2016). *Corruption and government: Causes, consequences, and reform*. Cambridge university press.
- [12] Shleifer, A. & Vishny, R.W. Corruption. *The Quarterly Journal of Economics*, 1993, Vol. 108, no. 3, pp. 599 – 617. ISSN 0033-5533.
- [13] Seo, J. W. & Mehedi, H. G. (2016). E-government Efforts against Corruption in Bangladesh: What We Have Done and What We Have to Do, *International Journal of Political Science & Diplomacy*, 2 (107), pp. 1-6, DOI 10.15344/ijpsd/2016/107.
- [14] Singh, G. et al. (2010). E-governance for improved public sector service delivery in India, Ethiopia and Fiji. *International Journal of Public Sector Management*, 23(3), pp. 254-275. DOI 10.1108/09513551011032473.
- [15] Transparency International. (2003). Corruption perceptions index 2003. [online]. [cit.2018-02-22]. Available at: [http://www.transparency.org/research/cpi/cpi\\_2003](http://www.transparency.org/research/cpi/cpi_2003).
- [16] Transparency International. (2016). Corruption perceptions index 2016. [online]. [cit.2018-02-22]. Available at: <http://www.transparency.org/cpi2014/interactive/>.
- [17] United Nations. (2003). United Nations e-government survey 2003. [online]. [cit.2018-02-22]. Available at: <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan016066.pdf>.
- [18] United Nations. (2016). United Nations e-government survey 2016. [online]. [cit.2018-02-22]. Available at: <http://www.un.org/en/development/desa/publications/connecting-governments-to-citizens.html>.

## **Some Issues of Withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union**

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### **Abstract**

*Based on the results of the UK referendum about the abundance of the United Kingdom of Great Britain and Northern Ireland in the European Union, the Article 50 of the Treaty of Lisbon was activated, and a two-year transition period was started during which the UK and the European Union must agree on the country's departure conditions. In view of the high degree of economic integration among the Member States of the Union, the negotiations will concern highly integrated areas of cooperation, notably the degree of preservation of the four freedoms within the single market. The interests of both sides vary from one point to another; the most questions relate to the issue of free movement of labor and the free movement of goods. The negotiation can result in the three variants of exit: 1. without agreement, 2. with partially satisfactory terms for both parties and 3. with agreement that will meet the expectations of both parties. The most likely the exit will be with a partial agreement, and we cannot exclude that expectations of both will not be fulfilled. In every case we can expect the economic loses on both parts. We cannot exclude the possibility of another referendum too. In this paper we will try to answer these open issues.*

**Keywords:** *Brexit, economic integration, single market*

**JEL Classification:** *F13, F14, O52*

### **1. Introduction**

In 1955, the United Kingdom of Great Britain and Northern Ireland rejected the proposal of the six western European states to join them and create a European Economic Community (EEC) with them. In the late 1950s and early 1960s, the political and economic position of the United Kingdom in the world began to weaken. One factor in this process was the isolation of the British economy from the market of the EEC Member States. In the early 1970s, the British Isles succeeded in joining the European Communities. From the beginning, however, this membership was accompanied by a number of exceptions - a 12-year transitional period in opening the British agricultural production market to continental Europe products, after the 12-year transitional period, again the exemption in the form of the British rebate, the exemption from the obligation to adopt the euro (opt-out) and to integrate into economic and monetary union in the future, exemption from participation in the Schengen area, etc. Despite the concessions, the United Kingdom, even after 43 years of EU membership, saw more disadvantages than the benefits of its economic integration under the current EU-28.

The aim of the article I to analyze some issues regarding the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union. The article is structured into



4 parts: introduction, literature review, discussion and conclusion. We use general scientific methods of description (literature review), analysis (discussion) and synthesis (conclusion).

## 2. Review of the Literature

The issue of a Member State leaving the European Union is unique in the history of Western European integration. Even though some other Member States sometimes contemplate such a potential option. The European Union has so far resolved the question of extending the membership to the new Member States seven times. The issue of the UK leaving the EU is addressed by many theoretical economists and representatives of economic practice. From scientific articles, we mention Catherine Offord (2017), Lenka Fojtková (2016), Alison Young (2016), Karl J. P. Smith (2016) and many other foreign, Czech and Slovak authors.

## 3. Discussion

The results of the referendum of July 23<sup>rd</sup>, 2016 on the United Kingdom's withdrawal from the European Union are evidence that even many concessions from complying with the rules of the European Union have not been sufficient for the United Kingdom to remain in the European Union. British voters have decided that their country will leave the EU-28. The United Kingdom, as the first Member State of the EU, has activated Article 50 of the Lisbon Treaty (Lisbon Treaty, 2018). Historically, the European Union will deal with the first withdrawal of one of the Member States, while it has addressed seven times the enlargement of the EU by the new Member States by 2013. Representatives of the most important British political parties have long criticized the functioning of the European Union. Nigel Farage, UKIP Chairman, has called for a second referendum on UK membership in the European Union (Bienkov, 2018). Likewise, Jeremy Corbyn, Chairman of the Labor Party (Pack, 2018). After announcing the results of the referendum, British Prime Minister David Cameron resigned to his post as the initiator of the referendum (Stewart, H. et al., 2016). Nevertheless, even in early 2018, prominent UK political leaders called on a second referendum to reverse the decision of British citizens to leave the EU-28. Designated Prime Minister Theresa May took a clear position on the results of the referendum: "Brexit means Brexit. And we want it to be a success" (Cowburn, 2016). The House of Commons voted for the law to start the process of the United Kingdom's withdrawal from the EU (Twitter, 2017). Theresa May's official letter from March 29<sup>th</sup>, 2017, announced to the European Union that the United Kingdom would begin the process of negotiating a withdrawal from the European Union (TVNOVINY.SK, 2017). The transition period for the United Kingdom's withdrawal process will end on December 31<sup>st</sup>, 2020 (Aktuality.sk., 2018).

The European Union, headed by EU chief negotiator Michel Barnier, has prepared a 120-page draft document on the Brexit withdrawal process (Hoslet, 2018).

Representatives of the European Union and the United Kingdom must agree on the conditions of UK withdrawal from the European Union. Three key areas represent disputed points in the negotiations - issues relating to the rights of the citizens of the European Union in the United Kingdom following its withdrawal from the Union, but also the rights of the citizens of the United Kingdom in the EU-27, the financial settlement of British commitments to the European Union, and the issue of the future border regime between Ireland and Northern Ireland.

In the issue of financial compensation for UK membership, the European Union claims a sum of 40-55 billion EUR, while the United Kingdom values its commitments by nearly half the

amount (Amadeo, 2018). In this context, the term for the United Kingdom's withdrawal - hard Brexit - began to be used informally, which should mean the UK withdrawal without paying its financial commitments to the EU or the withdrawal without agreement between the two parties for further cooperation.

The question of workers' migration from the European Union following the withdrawal of the United Kingdom from the European Union is another controversial issue. Restricting migration to the UK labor market or changing the status of workers from the Member States of the Union following their entry into the labor market is the subject of negotiations with representatives of the countries most represented on the UK labor market (Vargas-Silva, 2016). These include the Slovak Republic and Poland. There are 3 million citizens from the EU Member States in the United Kingdom's labor market. It will be necessary to resolve the issue of citizens' standing on both sides, including the position of British citizens in the EU-27 labor market. D'Angelo and Kofman (2018) also address the issue of the future status of the EU citizens in the United Kingdom.

Another issue is the functioning of the United Kingdom in the single EU market after December 31<sup>st</sup>, 2020. The single market, completed on January 31<sup>st</sup>, 1993, is a major success of economic integration. The four freedoms are one of the gains in the process of deepening economic integration between the Member States of the European Union, which is a major factor in their economic prosperity. From March 29<sup>th</sup>, 2019 to December 31<sup>st</sup>, 2020, a transition period will apply in the EU-UK relations. During this period, citizens and businesses will be able to reconcile their relationships within the EU single market or the UK market (BBC News, 2018b). From March 2019, tariffs, non-tariff and administrative barriers may be introduced when goods cross the border between the United Kingdom and the European Union, i.e. between France and Ireland. The creation of long lines at customs frontiers, which will complicate and increase the price of exchange of goods and services, is unacceptable for entrepreneurs and traders. Brakman, Garretsen and Kohl (2018) analyze the impacts of Brexit on international trade. They confirm substantial negative trade effects for the EU, UK, and major economies around the world. Dhingra et al. (2018) summarize the findings of research related to the UK's role in global economy, and the consequences of Brexit for UK trade, investment and living standards.

The United Kingdom wants to preserve three freedoms for its successful future development, namely the free movement of goods, services and capital. The question of the free movement of labor is proposed to be abolished. Another issue is resolving the border between the Republic of Ireland as the remaining Member State of the European Union and Northern Ireland, where the United Kingdom refuses to build a so-called fixed boundary (BBC News, 2017). The European Union believes after the UK's withdrawal from the EU, a classic customs and border regime must be built at the UK-Irish border.

#### **4. Conclusion**

The functioning of the European Union brings benefits and disadvantages to its Member States. Countries with a smaller economic potential can only successfully develop in the globalized world within the larger integration groupings unless they are specifically endowed with natural resources (Norway) or their historical economic development allows them a high degree of formal autonomy (Switzerland). However, a country with such great economic potential as the United Kingdom, can afford to risk and leave the EU-28, although the UK economy, without the connection to the EU market, will probably lose many possibilities for exchanging goods and services. Before the UK referendum, asking British citizens whether to remain in or leave the European Union, the EU Member States were willing to approach almost

any conditions for UK to remain part of the EU-28. The results of the referendum were an unfortunate surprise for all the EU Member States and probably for the UK itself. Despite the outcome of the referendum, and the opening of talks on UK withdrawal as of March 29<sup>th</sup>, 2019, the European Council President Donald Tusk has told British citizens that if they think the Brexit over, the Union will take them back (BBC News, 2018a). Once the transition period has elapsed, the United Kingdom may again apply for membership in the European Union by activating Article 49 of the Lisbon Treaty (Lisbon Treaty, 2018). I want to join Per Wijkman's opinion, which assesses UK's withdrawal from the EU as a loss to both sides (Wijkman, 2017).

## References

- [1] Aktuality.sk. (2018). Prechodné obdobie po brexite sa skončí v roku 2020 [online]. [cit.2018-03-25]. Available at: <https://www.aktuality.sk/clanok/573972/prechodne-obdobie-po-brexite-sa-skonci-v-roku-2020/>.
- [2] Amadeo, C. (2018). *Brexit Consequences for the UK, the EU, and the United States* [online]. [cit.2018-03-24]. Available at: <https://www.thebalance.com/brexit-consequences-4062999>.
- [3] BBC News (2017). *EU 'worried' by UK's Irish border proposals* [online]. [cit.2018-03-22]. Available at: <http://www.bbc.com/news/uk-politics-41183041>.
- [4] BBC News (2018a). *Donald Tusk: EU's 'heart still open to UK' over Brexit* [online]. [cit.2018-03-22]. Available at: <http://www.bbc.com/news/uk-politics-42702065>.
- [5] BBC News (2018b). *The UK and EU agree terms for Brexit transition period* [online]. [cit.2018-03-22]. Available at: <http://www.bbc.com/news/uk-politics-43456502>.
- [6] Bienkov, A. (2018). *Now even Nigel Farage wants a second Brexit referendum* [online]. [cit.2018-03-25]. Available at: <http://uk.businessinsider.com/nigel-farage-wants-a-second-brexit-referendum-eu-2018-1>.
- [7] Brakman S. – Garretsen, H. - Kohl T. (2018). Consequences of Brexit and options for a 'Global Britain'. *Pap Reg Sci.*, vol. 97, iss. 1, pp. 55–72.
- [8] Cowburn, A. (2016). *Theresa May says 'Brexit means Brexit' and there will be no attempt to remain inside EU* [online]. [cit.2018-03-24]. Available at: <https://www.independent.co.uk/news/uk/politics/theresa-may-brexit-means-brexit-conservative-leadership-no-attempt-remain-inside-eu-leave-europe-a7130596.html>.
- [9] D'Angelo, A. - Kofman, E. (2018). From Mobile Workers to Fellow Citizens and Back Again? The Future Status of EU Citizens in the UK. *Social Policy and Society*, vol. 17, iss. 2, pp. 331-343. doi:10.1017/S1474746417000495.
- [10] Dhingra S. et al. (2018). UK trade and FDI: A post-Brexit perspective. *Pap Reg Sci.*, vol. 97, iss. 1, pp. 9–24.
- [11] Fojtíková, L. (2016). Aspects of brexit from the foreign trade point of view. In *International Relations 2016 Current issues of world economy and politics*. Smolenice: University of Economics in Bratislava, Faculty of International Relations, pp. 309-322.
- [12] Hoslet, O. (2018). *EU Brexit withdrawal proposal: a lawyer explains the detail* [online]. [cit.2018-03-26]. Available at: <https://theconversation.com/eu-brexit-withdrawal-proposal-a-lawyer-explains-the-detail-92620>.

- [13] Lisbon Treaty (2018). *Lisbon Treaty* [online]. [cit.2018-03-26]. Available at: [https://www.mzv.sk/documents/10182/11845/Zmluva\\_o\\_EU.pdf/89897b04-a8a5-4aa2-91e3-4d773e80606d](https://www.mzv.sk/documents/10182/11845/Zmluva_o_EU.pdf/89897b04-a8a5-4aa2-91e3-4d773e80606d).
- [14] Offord, C. (2017). *Scientists' Expectations for Brexit Mostly Grim* [online]. [cit.2018-03-21]. Available at: <https://www.the-scientist.com/?articles.view/articleNo/50306/title/Scientists--Expectations-for-Brexit-Mostly-Grim/>.
- [15] Pack, M. (2018). *Jeremy Corbyn's views on Brexit: a long held stance on Europe* [online]. [cit.2018-03-21]. Available at: <https://www.markpack.org.uk/153744/jeremy-corbyn-brexit/>.
- [16] Smith, K. J. P. (2016). *Why the Science Community Says No to Brexit* [online]. [cit.2018-03-21]. Available at: <https://www.scientificamerican.com/article/why-the-science-community-says-no-to-brexit/>.
- [17] Stewart, H. et al. (2016). *David Cameron resigns after UK votes to leave European Union* [online]. [cit.2018-03-24]. Available at: <https://www.theguardian.com/politics/2016/jun/24/david-cameron-resigns-after-uk-votes-to-leave-european-union>.
- [18] TVNOVINY.SK. (2017). *Brexit je oficiálne spustený, Británia aktivovala článok 50 Lisabonskej zmluvy* [online]. [cit.2018-03-26]. Available at: [http://www.tvnoviny.sk/zahranicne/1863878\\_brexit-je-oficialne-spusteny-britania-aktivovala-clanok-50-lisabonskej-zmluvy](http://www.tvnoviny.sk/zahranicne/1863878_brexit-je-oficialne-spusteny-britania-aktivovala-clanok-50-lisabonskej-zmluvy).
- [19] Twitter. (2017). *UK politicians back government's bill to trigger Article 50 and start the Brexit process by 494 to 122* [online]. [cit.2018-03-26]. Available at: <https://twitter.com/BBCBreaking/status/829425174273404928>.
- [20] Vargas-Silva, C. (2016). EU Migration to and from the UK After Brexit. *Intereconomics*, vol. 51, iss. 5, pp. 251-255.
- [21] Wijkman, P. (2017). *Brexit – A Lose-Lose Proposition* [online]. [cit.2018-03-24]. Available at: <https://www.socialeurope.eu/brexit-lose-lose-proposition>.
- [22] Young, A. (2016). *The Brexit Case* [online]. [cit.2018-03-24]. Available at: <http://www.ox.ac.uk/news-and-events/oxford-and-brexit/brexit-analysis/brexit-case>.

## European Integration and Reporting Requirements of Companies in the Slovak Republic

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### **Abstract**

*The establishment of the European Union by the signing of the Maastricht Treaty signified the deepening of European integration. The first steps led to the implementation of a common foreign and security policy, cooperation between the individual states of the European Union, and harmonization of economic legislative norms. Cooperation between the individual states of the EU has required an introduction of uniform rules for the member states. Even in the field of accounting, an introduction of uniform disclosure requirements for companies in the EU countries, including the Slovak Republic, has become an important step. In addition to the requirements for the qualitative nature of the published information on companies in the Slovak Republic, emphasis is also placed on the principles of European integration aimed at sustainable development, which requires socially responsible entrepreneurship in companies as one of its building blocks. The importance of this topic lies in the growing importance of publishing high-quality information about Slovak companies on the basis of the principles of European integration.*

**Keywords:** *corporation responsibility, disclosure of information, European integration, sustainable development*

**JEL Classification:** *D21, K32, M14, M40, M41*

### **1. Introduction**

The formation of the European Union (EU) by signing the Maastricht Treaty has advanced the European integration process. The principles of European integration are the core values of the EU based on respect for human dignity, liberty, democracy, equality, rule of law, and human rights, including minorities. EU cooperation and the achievement of financial, social, cultural, and political goals of the EU are built on the principles of the EU (Turečková and Nevima, 2016). Principles of European integration aimed at sustainable development requires socially responsible entrepreneurship as one of its supporting elements with regard to individual businesses and the achievement of the EU goals. The principles based on the concept of sustainable development can be - in other words - characterized as a targeted process affecting cultural, social, economic, and environmental aspects of life aimed at reaching and maintaining an effective community that satisfies all the needs of people while protecting the environmental and reducing adverse environmental impacts threatening the quality of natural resources for the future generations. The concept also changes the way we evaluate and assess business conduct within the community.

Companies shall now publish not only their financial information but information on their non-financial situation as well. The EU is aware of the requirement to disclose essential business

information - financial or other - and therefore it introduces uniform rules for all Member States to adhere to. The introduction of uniform reporting requirements - based on the ideas of European integration - became an important element of the accounting system of the companies operating in the Slovak Republic.

## **2. Problem Formulation and Methodology**

This Article is aimed at analyzing reporting requirements of the companies operating in the Slovak Republic based on the principles of European integration. The analysis is based and follows available editorial sources and applicable legislation. Background information is derived from the analysis of qualitative reporting characteristics in the annual report pursuant to the Slovak legislation, i.e. Act 431/2002 Coll., Accounting, as amended (Accounting Act). Non-financial information is related to corporate social responsibility, as one of the core values of the sustainable development, this Article drafts general information disclosure / reporting procedures and sets a framework for companies to align with.

## **3. Problem Solution**

All areas of social responsibility - as a prerequisite for sustainable development - provides specific information associated with business conduct. One of the essential accounting duty is to incorporate this information and process it to a usable form in order to meet the information needs of all stakeholders. The ability to perform this duty is one of the core requirements to assess qualitative characteristics of information. Companies with high CSR standards have the opportunity to submit non-financial information in the form of an annual report. Information presented in the annual report is effective, if it is useful in a decision making process. The effectiveness of information presented in the annual report is material, if its disclosure or omission in the annual report could affect the judgment or decision of any stakeholder. Information assessed in terms of materiality must be comprehensible, comparable, and reliable. (Accounting Act, 2017) Non-financial information may require the same qualitative characteristics as financial information. Bočková (2015) explores the issue of R&D expenditures in the business sector of performance and she hit the disparity in reporting which does not allow their comparison.

Cooperation of individual Member States of the EU in meeting the EU's goals and objectives requires a harmonization of legal standards to reduce the number of differences and irregularities of legislations and inconsistency of the terminology, and it focuses on the adherence to the reporting principles of key information in terms of the Scope of Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC, as amended (Directive 2013/34/EU), presentation (Pakšiová, Janhuba, 2012). Its amendment, Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards non-financial reporting and diversity information by certain large undertakings and groups (Directive 2014/95/EU), lays emphasis on the importance of information. The aim of Directive 2014/95/EU is to improve the consistency and comparability of financial information throughout the EU by including non-financial statements in the annual reports of selected companies.

Companies in the SR do not submit non-financial CSR related statements, but they include this information in the annual report. EU Commission has published Guidelines on non-

financial reporting (European Commission, 2017) pursuant to Directive 2014/95/EU. Its purpose is to facilitate and make the process of reporting high-quality, relevant, useful, uniform, and comparable non-financial information easier (Staničková, 2016). Non-financial information disclosure requirements applies to several large corporations with more than 500 employees, since its application to small companies may burden them with unreasonable costs, which outweigh the benefits of such disclosure. Companies are required to report relevant and useful information necessary to understand their development, conduct, position, and impact.

Reporting of non-financial information applies to certain public-interest entities and not all large enterprises pursuant to the Accounting Act. Public-interest entities (“PIE”) include banks, office of a foreign bank, fund management company, office of a fund management company, insurance company, Slovak Insurance Office, pension management company, supplementary pension company, Stock Exchange, office of an insurance company from another Member State, office of a foreign insurance company, office of a reinsurance company from another Member State, office of a foreign reinsurance company, and any company that meets at least two of the conditions below for at least two consecutive accounting periods (Accounting Act, 2017):

- a) total amount of the assets over € 170,000,000 (i.e. the sum in the balance sheet in valuation not including any provisions);
- b) net turnover over € 170,000,000;
- c) average number of employees in a single accounting period over 2,000.

PIE except of the National Bank of Slovakia, whose average number of employees exceeded 500 employees in a single accounting period - shall also include information on the development, conduct, position, and impact related to the CSR in its annual report. Further information disclosed by PIEs in the annual report shall relate to the description of the business model, description and results of the CSR policy, and material non-financial information regarding business conduct in all relevant areas. In the context of the CSR, companies shall provide description of all main risks that could have adverse consequences, as well as description of business relations, products, and services of the company and the management and assessment thereof.

Disclosure of non-financial information in the PIE’s annual report does not need to be based solely on the Accounting Act. On the contrary, the Accounting Act allows companies to report non-financial information on the basis of the European Union framework or other international framework governing the reporting of non-financial information, if it gives specific references to the aforementioned. Pursuant to Amendment 2014/95/EU, companies may follow national frameworks, European Union frameworks - such as EMAS (Environmental Management and Audit Scheme) - or international frameworks, such as the United Nations Global Compact, Guiding Principles on Business and Human Rights Implementing the United Nations „Protect, Respect and Remedy Framework”, Organization for Economic Cooperation and Development (OECD), ISO 26000 International Organization for Standardization, Tripartite Declaration on Principles on Multinational Enterprises and Social Policy, Global GRI Reporting Initiative, or other frameworks recognized internationally.

The term „Corporate Social Responsibility” was introduced by the European Commission formally in the Green Paper on Promoting a European Framework for Corporate Social Responsibility, with the following statement: „Based on the CSR concept, companies voluntarily decide to contribute to a more just society and cleaner environment.” (The Green Paper [on-line], 2001). Transposing Directive 2013/34/EU and Amendment 2014/95/EU thereto into the Slovak legislation, the voluntary reporting of non-financial information of certain enterprises have changed into a statutory obligation pursuant to the Accounting Act.

Companies may present their CSR-related achievements by creating and publishing CSR reports. Currently active CSR concept is being pursued by large national and multinational companies in the Slovak Republic, which are profitable and can easily implement CSR in their businesses. Small businesses must face the challenges of insufficient financial resources and poor availability of information, which means that the companies are not inclined to invest resources in areas that are not necessary to set and run a successful enterprise short-term or when they do not see the importance of the application thereof to their benefit. Companies have different opinion on the application of the CSR concept, however, the following opinion of M. Herrmann (2007) could be the motto to introduce the CSR concept: „The fundamental attribute of competitiveness using conventional tools is increasingly difficult to find and the CSR aspect brings forth new opportunities”.

Any statements and reports shall include the definition of stakeholders thereto, since the interests of stakeholders are essential for different decision making processes, including issues linked to the liability of executives and managers (Cvik & MacGregor Pelikánová, 2016) and their business judgment in competition and other matters (MacGregor Pelikánová, 2017). Failure to identify or cooperate with stakeholders leads to the disclosure of information that is useless or inefficient for any and all stakeholders. On the other hand, cooperation leads to the effectiveness of information reported. It may also ignite the need for further training. Stakeholder management is basically a management of relationships. (Friedman, Miles, 2002) It is based on the idea that businesses should formulate and implement processes that meet the interests of all stakeholders to the business. This requires an active management and integration of stakeholders' interest into the corporate strategy and operations. (Moratis, Brandt, 2017)

Companies face growing demands for wider reporting and greater transparency from investors, government agencies, or other stakeholders. This poses a challenge for businesses to report information that meets the qualitative requirements. The organization whose task is to collect daily inquires and challenges in the area of reporting, transparency, audit, taxes, and sustainable development management and to compile reporting guidelines, is now called Accountancy Europe, which has changed its name from the Federation of Accountants (FEE) during the celebration of its 30th anniversary. Accountancy Europe is involved in various European projects on direct taxes, value added taxes, introduction of euro, or introduction of the new Statutory Audit Directive. Accounting experts contribute to the production of high-quality reports and statements and effective management of the business by securing a flow of effective information between the management, board of directors, state authorities, and other stakeholders that is necessary to support the management of sustainable growth and development as part of the system of audits and internal control. Accountancy Europe finds a significant growth of non-financial reporting initiatives and frameworks, and therefore - in its „Non-Financial Reporting Initiatives and Frameworks Coordination” guidelines - it calls for a higher standardization and harmonization and a creation of a comprehensive uniform reporting framework on the principles of transparency and truthfulness. Accountancy Europe brings together 51 expert organizations from 37 countries that represent millions of experts in the field of accounting, auditing, and economic advisory services. Of these, there are 45 full members, 5 associate members, and 1 correspondent member. The Council of Accountancy Europe has 12 members from 11 countries and is chaired by the president elected for a two-year term. Core actions of all 51 members is to send experts to cooperate with specialist groups across Europe to participate in European projects and challenges. Only expert accounting organizations of high standards and reputation may apply for membership. Individual accountants cannot become members. Expert accounting organizations may apply for three



different types of membership, full /associate/ correspondent. Each type of membership has different competencies and responsibilities as listed in Table 1.

**Table 1: Types of Membership**

<b>Types of Membership</b>		
<b>Full Member</b>	<b>Associate Member</b>	<b>Correspondent Member</b>
are not part of a government, nor have a commercial activity as their main purpose	do not meet all the conditions for Full Membership, but are committed to do so	do not and are not expected to meet all the conditions to become Full or Associate Members
comprise members whose professional qualification is recognised in one or more European countries;		do share Accountancy Europe's values and objectives
require its members to comply with high professional and ethical standards		require its members to comply with high professional and ethical standards
are established in Europe		

Source: Accountancy Europe (2017a). Membership Types. [online]. [cit.2018-02-22]. Available at: <https://www.accountancyeurope.eu/members/>

**Table 2: Accounting Act (Act 431/2002 Coll) and Directive 2013/34/EU Comparison - Form and Content of Non-Financial Reporting**

<b>Act 431/2002 Coll</b>	<b>Directive 2013/34/EU</b>
<p>Section 20 (9) Public-Interest Entity, except for the National Bank of Slovakia, whose average number of employees in a single accounting period exceeded 500 employees, shall report non-financial information in its annual report related to the development, conduct, position, and impact of the entity on the environmental, social, and employment area, information related to the respecting of human rights, and anti-corruption information (hereinafter the „Corporate Social Responsibility” or „CSR”), stating in particular:</p> <p>a) brief description of the business model;  b) description and results of the policy applied in the Corporate Social Responsibility area;  c) description of the main CSR risks that may have adverse impacts, and - if applicable - the description of any and all business relations, products, and services of the company along with the management and assessment thereof;  d) key non-financial business information of the entity by its activities</p>	<p>Art. 19 (1) Large enterprises - that meet the requirements of the Public-Interest Entity and exceeded 500 employees for a single accounting period - shall report non-financial information containing information required to understand the development, conduct, position, and impact of the entity on the environmental, social, and employment area, information related to the respecting of human rights, and anti-corruption information, including:</p> <p>a) brief description of the business model;  b) description of CSR policies established by the entity, including due diligence procedures applied thereto;  c) consequences of individual policies;  d) main CSR risks that may have adverse impacts, and - if applicable and appropriate - the description of any and all business relations, products, and services of the company along with the management and assessment thereof;  d) key non-financial business information of the entity by its activities.</p>

Source: Act 420/2002 Coll., Accounting, as amended, Directive 2013/34/EU, as amended.

Following the transposition of Directive 2014/95/EU into the national legislation of the EU Member States as well as the SR, questions arise related the information disclosure and reporting. As a result of these questions and challenges, CSR and Global Initiative Reporting in cooperation with Accountancy Europe produced a project aimed at monitoring impacts of Directive 2014/95/EU on enterprises, collecting information on the local implementation of Directive 2014/95/EU, understanding the direction of the direction in this regard, and providing communication related to non-financial reporting across the EU. (Accountancy Europe [online], 2017) Growing expectations of stakeholders towards non-financial reporting and recent legislative requirements in the EU create external pressure on the companies to submit non-financial information as part of their conduct.

Table 2 shows the comparison of basic provisions related to the form and content of non-financial reporting in the SR pursuant to the Accounting Act 431/2002 Coll., as amended, with effect from 1 January 2017 and pursuant to Directive 2013/34/EU, as amended.

#### **4. Conclusion**

Principles of European integration form core values of the European Union serving as basis for cooperation of individual Member States of the EU and achievement of goals of sustainable development. Principles of European integration have also been reflected in reporting and accounting procedures. Companies in the SR have the opportunity to report business information in their annual reports. Information is efficient if it serves its purpose for all stakeholders thereto. Pursuant to the Accounting Act, information's efficiency is assessed in terms of materiality, and information must be clear, comparable, and reliable. Non-financial information may require the same qualitative characteristics as financial information. Within the context of sustainable growth and the general goals of European integration, businesses should submit business performance measurable and comparable within the EU. However, information efficiency is hindered currently as a result of the inconsistency of reporting procedures. In order to increase the relevance of the information and to provide for a comparability of information, European Parliament and the Council introduce a new rule to produce non-financial report as a separate document or part of the annual report, thus harmonizing the information submitted therein. The Commission of the European Union has published Guidelines on non-financial reporting in order to facilitate the reporting of high-quality, relevant, useful, consistent, and comparable non-financial information. Reporting of non-financial information does not need to be based solely on the Accounting Act. Companies may report non-financial information on the basis of the European Union framework or other international framework governing the reporting of non-financial information, if it gives specific references to the aforementioned. Companies face growing demands for wider reporting and greater transparency from investors, government agencies, or other stakeholders. Any statements and reports shall include the definition of stakeholders thereto, since the interests of stakeholders are essential for different decision making processes. Accountancy Europe helps to create frameworks for high-quality information reporting based on the principles of European integration, which represents experts in the field of accounting, auditing, tax, and other advisory services. It calls for a higher level of standardization and creation of an extensive reporting framework system based on best practice. As a result of these questions and challenges, CSR and Global Initiative Reporting in cooperation with Accountancy Europe produced a project aimed at monitoring impacts of Directive 2014/95/EU on enterprises, collecting information on the local implementation of Directive 2014/95/EU. New space opens up for deeper research in order to develop harmonized and unified business reporting rules and procedures. High-quality reporting of financial and non-financial

information is a prerequisite for maintaining a sustainable growth, as one of the core objectives of the European Union.

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### **References**

- [1] Accountancy Europe (2017a). Membership Types. [online]. [cit.2018-02-22]. Available at: <https://www.accountancyeurope.eu/members/>.
- [2] Accounting Act (2017). *Act 431/2002 Coll., Accounting, as amended* [online]. [cit. 2018-02-22]. Available at: <http://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2002/431/20170101>
- [3] Accountancy Europe (2017). *Accountancy Europe*. [online]. [cit. 2018-02-22]. Available at: <https://www.accountancyeurope.eu/about-us/>
- [4] Bočková, N. (2013). Visegrad Four countries: evaluation in R&D sectors of performance. Indexed: Scopus. *Acta Universitatis Agriculturae Et Silviculturae Mendelianae Brunensis*. [online]. [cit. 2018-02-22] vol. 61, iss. 4, pp. 873-880. Available at: <https://doi.org/10.11118/actaun201361040873>
- [5] Cvik, E.D. and MacGregor Pelikánová, R. (2016). A comparative study of the legal liability of executives in LLC in the Czech Republic & some of other EU member states. Indexed: Scopus. In *Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration*, vol. 23, iss. 36, pp. 54-65.
- [6] Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing council Directives 78/660/EEC and 83/449/EEC.
- [7] Directive 2014/95/EU of the European Parliament and of the council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups.
- [8] European Commission (2017). *Oznámenie Komisie - Usmernenia k zverejňovaniu nefinančných informácií (metodika zverejňovania nefinančných informácií) (C/2017/4234)*. [online]. [cit. 2018-02-22]. Available at: <https://publications.europa.eu/sk/publication-detail/-/publication/845ab879-6182-11e7-9dbe-01aa75ed71a1>.
- [9] Friedman, A. and Miles, S. (2002). Developing stakeholder theory. Registered: Web of Science. *Journal of management studies*, vol. 39, iss. 1, pp. 1-21. [online]. [cit. 2018-02-22]. Available at: [https://apps.wofknowledge.com/full\\_record.do?product=WOS&Search\\_mode=GeneralSearch&qid=5&SID=F25PrxX6YaPmRZAKFQk&page=1&doc=1](https://apps.wofknowledge.com/full_record.do?product=WOS&Search_mode=GeneralSearch&qid=5&SID=F25PrxX6YaPmRZAKFQk&page=1&doc=1). DOI: 10.1111/1467-6486.00280.

- [10] Herrmann, M. (2007). Corporate Social Responsibility. III. Annual Conference „Excellence in Finance” In *Financial Management*.
- [11] MacGregor Pelikánová, R. (2017). European myriad of approaches to parasitic commercial practices. Registered: Web of Science. *Oeconomia Copernicana*, vol. 8, iss. 2, pp. 167-180. [online]. [cit. 2018-02-22]. Available at: <https://doi.org/10.24136/oc.v8i2.11>.
- [12] Moratis, L. and Brandt, S. (2017). Corporate stakeholder responsiveness? Exploring the state and quality of GRI-based stakeholder engagement disclosures of European firms. Registered: Web of Science. Indexed: Scopus. *Corporate Social Responsibility and Environmental Management*. [online] [cit. 2018-02-22]. vol. 24, iss. 4, pp. 312-325. Available at: <https://doi.org/10.1002/csr.1408>
- [13] Pakšiová, R. and Janhuba, M. (2012). *Theory of Accounting in the Context of World Development*. Bratislava: Iura EDITION.
- [14] Staničková, M. (2016). Practical Aspects of EU Project and Grant Management in Programming Period 2014-2020. Registered: Web of Science. In *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, 2016, pp. 898-907.
- [15] The Green Paper Promoting a European Framework for Corporate Social Responsibility, (2001). [on-line]. [cit. 2018-02-22]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3An26039>.
- [16] Turečková, K. and Nevima, J. (2016). The perils of drawing from European funds in public education. Registered: Web of Science. In: *Public Administration 2016: Proceedings of the 11th International Scientific Conference*. Pardubice: University of Pardubice, pp. 273-283.

## **The Banking Sector in the Czech Republic Under the Conditions of the European Integration**

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### **Abstract**

*This article begins with an introduction to globalization. The globalization of the financial markets and the factors which caused it are subsequently characterized. This characterization includes the identification of both the positive and negative effects of financial globalization. A significant part of the article deals with the specific manifestations of globalization in the European financial market, in particular with respect to the banking market in the Czech Republic. The findings prove the undeniable impact and implications the globalization processes has had on the Czech financial market. This is evidenced by the intensity of the global competition in the form of the number of banking institutions linked by capital to foreign countries and which offer global financial products. These actors on the Czech banking market are a key object of study for the author and significantly contribute to the article's outcomes. The author analyses the progression of the banks since 2000 in terms of European integration.*

**Keywords:** bank, European banking sector, European Union, financial globalization

**JEL Classification:** E52, F65, G21

### **1. Introduction**

Globalization, as a rule, we understand the linking of the world into one big society. Globalization is characterized as spontaneous, mainly the economic process. Experts consider economy as one of the main driving forces of the globalization (Vítek, 2001). "Globalization is a process of integration of the society to a higher level of geographical ranking, than it was in earlier stages of development of the society. The globalization process is natural, inevitable and up to a point predictable. Similar shifts had also occurred in the past – from local to regional level, the regional level of the national one. The driving force is the globalization of economic activities, which links the production and markets of different countries, through trade in goods and services, the movement of capital and information, and interconnected network of ownership and control of multinational companies." (Sýkora, 2000, p. 59). Economic globalization shifts the organization and integration of the systems of production and consumption, shifts from the national to the global level or, rather, to add global levels of organization and integration to existing national, regional and local systems, including the vertical link. The term globalization indicates a shift trend in the geographical scale of economic integration. Globalization processes cannot be regarded as uniquely positive or negative – logically, globalization brings both opportunities and risks. A linkage of the contemporary world has visible consequences -- the country economy, which has managed to participate in the world economy, is growing faster. Conversely, a country outside the globalization process usually lags behind economically.

## 2. Problem Formulation and Methodology

A research problem of this paper is to identify the positive and negative effects of globalization of the financial market and to determine the degree of globalization in the banking sector in the Czech Republic. The information on the globalization of financial markets comes primarily from secondary sources. In terms of the scientific methods used, an analysis and subsequent synthesis was carried out of information specifically relating to the Czech Republic. Journals and articles served as an information source for the clarification of the concept of financial globalization and for examining the impact of globalization on financial markets. In order to identify the global competitors that are active on the Czech banking market, Internet published databases of financial institutions were employed.

### 2.1 Model and Data

“A key feature of financial services liberalization is the increasing presence of foreign banks in a nation.” (Ghosh, 2016, p. 1) Therefore, you can assume that the consequences of globalization are also in the banking sector in Central Europe, the representative of the Czech banking sector is as well. The aim of the following identification and analysis of banking institutions operating on the Czech financial market in the downstream section of the article is to prove their international to global dimension arising out of capital links with foreign countries. The Czech banking sector is characterized by a relatively strong competition of banking institutions, as it was apparent in the collection of secondary information.

The following table No. 1 shows the development of the number of banks operating in the Czech Republic (without the Czech National Bank, which the Ministry of Finance of the CR and the Czech National Bank resources have reported separately) in the years 2000 until 2017.

**Table 1: The Number of Banks Operating in the Czech Republic in the Years 2000 Until 2017**

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number	40	38	37	35	35	36	37	37	37	39	41

Year	2011	2012	2013	2014	2015	2016	2017
Number	44	43	44	45	46	45	45

Source: Ministerstvo financí ČR (2017), Česká národní banka (2018)

The forecast of the number of banks on the following periods may be established on the basis of statistical averaging methods. Representatives for the calculation of the mean are the arithmetic mean, mode and median. A very convenient method for practically prognostication is treated as exponential smoothing (Hart, Rašner and Lukoszová, 2012).

The formula for the plain arithmetic mean:

$$\bar{x} = 1/n \sum_{i=1}^n x_i \quad (1)$$

The mode is the value that occurs most frequently in the statistical data file. The median is the value which divides the range in ascending sorted the results into two equal halves. If a file has an even number of elements, usually the median indicates that the arithmetic mean of the values in the places  $n/2$  and  $n/2+1$ . This is the mean value for the interval.

The formula for the calculation using Brown method of the exponential levelling:

$$P_n = (1 - \frac{1}{n}) \cdot P_{n-1} + \frac{1}{n} \cdot p_n \tag{2}$$

$P_n$ ...value for a period 1 until n

n...number of periods

$p_n$ ...value for the last period

From information on the number of foreign-owned banks to calculate the degree of internationalization of the banks according to a simple formula:

$$I_i = \frac{Bz}{Bc} \tag{3}$$

$I_i$ ...internationalization rate

Bz...number of banks in foreign ownership

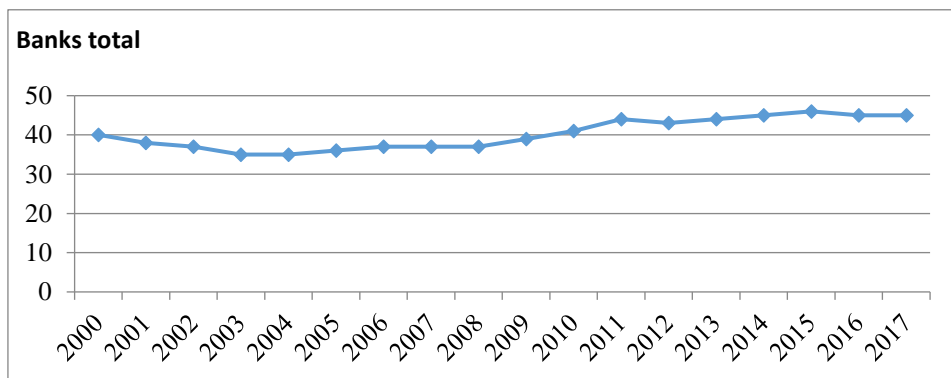
Bc...total number of banks

Internationalization is considered as the megatrend of business, which is a consequence of the globalisation (Pražská and Jindra, 2012).

### 2.2 Model Calibration

The following Figure 1 represents a model of the number of banks development in the Czech Republic

**Figure 1: Development of the Number of Banks in the Czech Republic Within 2000-2017**



Source: Own by Ministerstvo financí ČR (2017), Česká národní banka (2018)

The simple arithmetic average of the number of banks is calculated from the formula (1):  $(40+38+37+35+35+36+37+37+37+39+41+44+43+44+45+46+45+45)/18 = 40.22$  banks.

The mode for the number of banks for the period within 2000-2017 is the most frequently occurring value of this time series. The value of 37 banks in time series shows the absolute frequency of 4, so it is a modulus of the values of the monitored time series. The value of 45 then the absolute frequency is 3. However, it is the last value of the reference period; the last published data about the number of banks comes from the November of 2017. The trend of the last period is of highest importance for the prognosis.

Average value or median is the middle value of the statistical set. The median is the number separating the higher half of the sorted data (or data file) from the lower half. The median is the second quartile (Q2), 5. Deciles and 50. Percentile. The calculation of the median from the interval from 35 to 46 banks is therefore 39.50.

The estimated value of the year 2018 calculated by Brown exponential levelling method is determined by the formula (2):

$$P_n = \left(1 - \frac{1}{18}\right) \cdot 45 + \frac{1}{18} \cdot 45 = \mathbf{45 \text{ banks}}$$

Globalization of financial markets is due to two main factors: the first is the liberalization of world trade and foreign exchange regimes, and the second one is financial innovation. Liberalization of world trade and foreign exchange regimes removes institutional barriers of trade and capital flows. Financial innovation is largely raised and supported by the development of telecommunication and innovative technologies. Financial globalization relates to financial intermediation and it is linked to it, inter alia, the issue of the stability of the financial systems of the individual countries, integration groupings or currency areas. Financial globalization has its own driving incentives and it is also autonomously operating factor that significantly affects the economies of virtually all countries of the world by that exchange rates of national currencies are continuously enshrine in global financial markets. Financial globalization may, in addition to its positive effects, exacerbate the progression and amplify the impacts of the risks that are inherent to trade the financial markets. The information thus indirectly shows the growing importance and the importance of the management of market risks by banks and other financial institutions, in particular from the perspective of currencies and areas where signs of instability can spread and underscore the importance of such institutionalized supervision over the financial risks (Erbenová, 2005). Financial globalization has significant benefits in the form of release of capital flows and the development of derivative trades (examples of derivatives are futures, options and swaps), which helps to reconcile the worldwide a supply and a demand of financing of the national debt and also a demand from large companies. Globalized markets also contribute to a more efficient allocation of financial capital on a global scale and expand the possibilities for financial risk management by the way of diversification and hedging. The removal of institutional barriers strengthens competition and improves the range of financial products and services. It benefits all clients of financial institutions. International capital markets at the same time also provide investment opportunities for small investors from different countries of the world, in particular through collective investment undertakings. The globalization of financial markets has also its shady sites which include inter alia, the fact that amplifies the potential for multiplication of financial risks (Rogoff, 2007). It can also speed up the transfer of the crisis across the state borders as well as to countries with healthy macroeconomic policies and to deepen of the fluctuations of the global economic cycle, as we were, indeed, seen in the period around the year 2010. This can lead to destabilization of the local financial system and severely damage of economic growth. Therefore, in the context of the growing financial globalization, the stability of the financial system has become a priority on the agenda of central banks and international financial institutions. Financial globalization is caused by the operation of foreign exchange markets and the European market for financial services. Its importance to our economy is due to the fact that it occurs to the operation and the settlement a decisive part of the turnover of our foreign trade and also the investors from the developed countries of the European Union directly or indirectly control a crucial part of the assets of the banking sector, that is the basis of the financial system of the country. This strengthens the financial stability of the Czech Republic and allows for the supervision of the Czech financial system. The central



actors in the financial market are financial institutions that create an integrated financial system. The financial system is a structured space in any economy, in which financial services are implemented. So it is that also in the case of the financial market of the European Union and, indeed, the Czech Republic. The Central Bank supervises on the stability of the financial market (as well as the financial system) (Kurka and Paříková, 2014).

### 3. Problem Solution

The analysis of secondary sources of information indicates that the financial market in the Czech Republic is operated and in the following year will be probably operated 45 banks and branches of foreign banks, which offer their clients through the globalized processes of global products adapted to local conditions of economy. The banking sector in the Czech Republic is therefore considered to be stabilized. Apart from them, the Czech National Bank permanently performs the function of the central bank. Out of 45 banking institutions and branches (listed in Table 1) acting on the territory of the Czech Republic is based on the currently published information 91.11%, in the absolute number of 41 banks, as a part of some of the financial groups having their registered office abroad. Banks, including branches of foreign banks and their capital or geographical links with foreign countries demonstrates the following Attachment 1: Banks operating on the market of the Czech Republic and their links with foreign countries.

The information referred to in the present article is so documented indisputable influence of globalization and the globalization processes on the banking sector in the Czech Republic.

### 4. Conclusion

Financial globalization has also benefits on the Central European market in the form of release of capital flows and the development of derivative trades. Globalized markets are contributing to a more efficient allocation of financial capital on a global scale and expand the possibilities for financial risk management. The removal of institutional barriers strengthens competition and improves the range of financial products and services. On the other hand the globalization of financial markets has weak sides too, it belongs on the contrary fact that amplifies the potential for multiplication of financial risks. It can also speed up the transfer of the crisis across the border of the countries. This can lead to destabilization of the local financial system and severely damage of economic growth.

The transition economies of Central Europe to market conditions are an important prerequisite for the changes in the banking systems in those countries. The globalization of the banking sector and its privatization by foreign capital, as well as adapting to the conditions of the European Union and the growing competition from non-banking entities, force bank to look for relatively new approaches in all fields of their activities. (Čepelová, Polouček, 2003)

In relatively stabilized banking sector in the Czech Republic (Juřík, 2011); there are till 1 January 2018 in addition to the Czech National Bank, 2 more banks directly in the ownership of the Czech Republic. The Czech Export Bank and the Českomoravská záruční a rozvojová banka. Czech owners then have 2 banks: Bank Creditas and Fio Bank. The remaining banks, listed in Table 1, are the banks based abroad, owned by a foreign person or foreign-owned financial group, and the branches of foreign banks. 24.44% (11 of the banks), almost one quarter of the banks operating on the Czech territory, have its registered office outside the territory of the European Union.

These institutions are trying to offer to their clients a wide range of global competitive financial products (loans, mortgages, savings accounts, time deposits, union trusts, insurance, etc.). However, foreign banks face many informational bottlenecks that hinder them from lending to a large majority of potential client-base in host markets (Gosh, 2017).

## References

- [1] Čepelová, A., Polouček, S. (2003). Application of strategic methods for evaluation of portfolio banking products. Slovak Academic Press Ltd. Bratislava: Ekonomický časopis, vol. 51, pp. 688-707.
- [2] Česká národní banka (2018). *Bankovní statistika*. [online]. [cit. 2018-01-30]. Available at: [https://www.cnb.cz/cs/statistika/menova\\_bankovni\\_stat/bankovni\\_statistika/bank\\_stat\\_komentar.html](https://www.cnb.cz/cs/statistika/menova_bankovni_stat/bankovni_statistika/bank_stat_komentar.html).
- [3] Erbenová, M. (2005). Globalizace finančních trhů a integrace dozoru nad finančním trhem České republiky. In *Sborník konference VŠFS Aktuální vývoj finančních trhů, jejich regulace a dozor*. Praha: VŠFS, s.19-30.
- [4] Ghosh, A. (2016). Banking sector globalization and bank performance: A comparative analysis of low income countries with emerging markets and advances economies. *International Review of economics&Finance*. Amsterdam: Elsevier Science BV, vol. 6. pp. 58-70.
- [5] Ghosh, A. (2017). How does banking sector globalization affect economic growth? Amsterdam: Elsevier Science BV, vol. 48, pp. 83-97.
- [6] Hart, M., Rašner, J. and Lukoszová, X. (2012). Demand forecasting significance for contemporary process management of logistics systems. Jeseník: Congress proceedings – CLC 2012. Carpatian Logistics Congress, pp. 199-205.
- [7] Juřík, P. (2011). *Banky a spořitelny v naší zemi*. Praha: Libri.
- [8] Kurka, R. and Paříková, A. (2014). *Subjekty finančního trhu*. Praha: C. H. Beck.
- [9] Ministerstvo financí ČR (2017). *Zpráva o vývoji finančního trhu v roce 2016* [online]. [cit. 2018-01-30]. Available at: <http://www.mfcr.cz/cs/soukromy-sektor/financni-stabilita-a-dohled/vyvoj-financniho-trhu/2016/zprava-o-vyvoji-financniho-trhu-v-roce-2-28773>.
- [10] Pražská, L. and Jindra, J. (2002). *Obchodní podnikání*. Praha: Management Press.
- [11] Rogoff, K. (2007). Impact of Globalization on Monetary Policy. In *The New Economic Geography: Effects and Policy Implications*. Kansas City: Federal Reserve Bank of Kansas City, pp. 265-305.
- [12] Sýkora, L. (2000). Globalizace a její společenské a geografické důsledky. In Jehlička, P., Tomeš, J., Daněk, P. *Stát, prostota politika: vybrané otázky politické geografie*. Praha: Přírodovědecká fakulta UK Praha, pp. 59-79.
- [13] Vítek, J. (2001). Globalizace není všelék. In *Hospodářské noviny* [online]. [cit. 2018-02-10]. Praha: Economia. Available at: <http://archiv.ihned.cz/c1-951251-globalizace-neni-vselek>.
- [14] <http://www.banky.cz/prehled-bank>.

**Attachment 1: Banks Operating on the Market of the Czech Republic and Their Links With Foreign Countries**

<i>Title of the bank</i>	<i>Title of the financial group/owner</i>	<i>Headquarters</i>
1. Air Bank, a.s.	PPF Group/Petr Kellner	Netherlands
2. Bank Gutmann A.G.	Gutmann Holding AG	Austria
3. Bank of China	Central Huijin Investment	China
4. BNP Paribas Fortis SA/NV	BNP Paribas	Belgium
5. BNP Paribas Personal Finance SA	BNP Paribas	France
6. BNP Paribas S.A.	BNP Paribas	France
7. Creditas (Banka Creditas)	UNICAPITAL	<b>Czech Republic</b>
8. Česká exportní banka, a.s.	Česká republika	<b>Czech Republic</b>
9. Česká spořitelna, a.s.	Erste Group Bank	Austria
10. Českomoravská stavební spořitelna, a.s.	ČSOB – KBC Group NV	Belgium
11. Českomoravská záruční a rozvojová banka, a.s.	Česká republika	<b>Czech Republic</b>
12. Československá obchodní banka, a.s.	KBC Group NV	Belgium
13. CitibankEurope plc	Citigroup	U.S.A.
14. Commerzbank Aktiengesellschaft	SoFFin, Capital group Companies, BlackRock	Germany
15. Deutsche Bank Aktiengesellschaft Filiale Prag	Deutsche Bank Group	Germany
16. Equa bank a.s.	Equa Group Limited	Great Britain
17. Expobank CZ	Igor Vladimirovič Kim	Kazakhstan
18. Fio banka	Fio, Marsa a Kopún	<b>Czech Republic</b>
19. HSBC Bank plc – pobočka Praha	HSBC	Great Britain
20. Hypoteční banka, a.s.	ČSOB - KBC Group N.V.	Belgium
21. Industrial and Commercial Bank of China Limited	Central Huijin Investment	China
22. ING Bank N.V.	ING Groepe	Netherlands
23. J&T BANKA, a.s.	CEFC	China
24. Komerční banka, a.s.	Société générale	France
25. mBank	Commerzbank	Germany
26. Modrá pyramida stavební spořitelna, a.s.	Société Générale	France
27. MONETA Money Bank, a.s.	J. P. Morgan	U.S.A.
28. MUFG Bank (Europe) N.V.	Mitsubishi UFJ Financial Group	Japan
29. Oberbank AG pobočka Česká republika	3-Banken Gruppe	Austria
30. PKO BP S.A.	PKO	Poland

31. Poštová banka, a.s. pobočka ČR	Skupina poštovej banky	Slovakia
32. PPF banka, a.s.	PPF	Netherlands
33. PRIVAT BANK AG	Raiffeisenbankengruppe	Austria
34. Raiffeisenbank, a.s.	Raiffeisen Bank International	Austria
35. Raiffeisen stavební spořitelna, a.s.	Raiffeisenbank International	Austria
36. Saxo Bank A/S	Seir Capital	Denmark
37. Sberbank CZ, a.s.	Sberbank Russia	Russia
38. Stavební spořitelna České spořitelny	Erste Group Bank	Austria
39. Sumitomo Mitsui Banking Corporation Europe Limited	Sumitomo Mitsui Financial Group, Inc.	Japan
40. UniCredit Bank Czech Republic and Slovakia, a.s.	UniCredit Group	Italy
41. Waldviertler Sparkasse von 1842 AG	Sparkassengruppe	Austria
42. Všeobecná úverová banka a.s.	Intesa Sanpaolo Holding International, S.A.	Luxemburg
43. Western Union International Bank GmbH	Western Union	Austria
44. Wüstenrot hypoteční banka, a.s.	Wüstenrot	Germany
45. Wüstenrot stavební spořitelna, a.s.	Wüstenrot	Germany

Source: Own by <http://www.banky.cz/prehled-bank>

## **Cultural Distance Inside European Union – Czech Republic and Poland**

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### **Abstract**

*To be neighbours by borders and to be in European Union does not necessary means to share the same values and to have a positive image about the other country and their products. Paper answers questions about semi-globalization based on Ghemawat's Framework. This paper targets the cultural distance and its impact on the consumer behaviour in two selected countries among European Union. The aim of this paper is to define consumer groups by their cultural distance to the other country. Online survey was completed by 154 Polish residents and by 271 Czech residents. This data has been examined by cluster analysis to define groups by their cultural distance. Through this analysis we can define certain groups of citizens based on their cultural distance.*

**Keywords:** cluster analysis, cultural distance, Czech Republic, European Union, Poland

**JEL Classification:** C38, F50, M31

### **1. Introduction**

Czech Republic and Poland has always been close, either by distance, or by common history. Now they are both in European Union, which they joined at the same time 1st of May 2004. By this date, their mutual and other exporting performance has increased (Gilbert and Muchová, 2018). But that is only one of many similarities. Despite having similar culture in national export field, consumer view can be different. Paper focuses on dividing Czech and Polish consumer into clusters based on their cultural distance to the other country. Especially it focuses on the approach which citizens from both countries have, measured by their engagement with the other country. In introduction author is describing the cultural differences and similarities in between both countries and the aim of this paper, followed by basic description of cultural distance in general.

Looking at the cultural differences, Hofstede is describing the differences in six different categories (power distance, individualism, masculinity, uncertainty avoidance, long term orientation and indulgence). The categories with the biggest differences are uncertainty avoidance and in the long term orientation. Czech citizens are more oriented into the long term than Polish citizens. By description on Hofstede explains this as a pragmatic sign of a country, meaning the Czech citizens know, that truth is really about context, time and situation. Also Czech citizens have lower risk tolerance (lower uncertainty avoidance) than Polish citizens. It means that Czech citizens are more for following the rules, even if the rules are set wrong. Rest of the dimensions are almost similar, with the maximum difference at 10 % (Hofstede Insights [online], 2017). Last thing can be the similarity in Generation's Y usage of cell phones (Valečková, 2016).

It has been proved that having common borders and similar history doesn't necessary mean having the same approach in consumer behaviour. As an example can be used the relationship between Czech Republic and Slovakia. By being one country for almost a hundred years and later splitting into two different countries in 1993, Czech and Slovak citizens could have the same behaviour signs. But there are some differences, for example in online behaviour (Pawlasová, 2016).

Same values can be found in national security perception, expressed by not only being in the European Union, but also be part of NATO (Græger, 2016). Both countries also belong into Visegrad Group, often called Visegrad four, or by shortcut V4. It is proven, that international business relations in between those four countries (Czech Republic, Slovakia, Austria and Poland) have been improved by becoming this group and in comparison with new incomers into EU are those countries vastly ahead, for example in manufacturing cooperation (Langbein, 2014). In between the similar signs between Czech Republic and Poland can be also included the most registered marks of quality in Visegrad Group (Velčovská and Sadílek, 2014).

Aim of this paper is to define groups of customers in the relation to the other analysed country. Theoretical foundation is based on CAGE framework, which is used to compare whole countries (Ghemawat, 2001). Excluding the Cultural distance and transforming it into consumer's perspective provided key data for this paper.

Cultural distance has been introduced in many economic and social spheres, mostly in business perspective. Based on Hofstede papers many authors used cultural distance to measure part of a relationship between two countries and its presumption into future business. The construction of cultural distance seems like an easy solution of how to bypass the complexity of variety of differences in national culture (Shenkar, 2012).

## **2. Problem Formulation and Methodology**

In this chapter are information about data collection methodology and about methods for analysing data.

### **2.1 Data Collection**

Approach to the other country can be described by many ways. Based on CAGE framework author made a questionnaire which measures the cultural relationship of a customer and the other country. Data and further research are focused on the attitudes and the statements of Czech and Polish citizens. Those two countries are compared by having the same statements and their four-point scale agreement.

Research analysis is based on primary data that are quantitative. This data was obtained by electronic questionnaire in both countries and in their native language. Polish questionnaire was translated by native Polish citizen and then was reviewed by two independent Polish citizens for a complete certainty and flawlessness. Both of those questionnaires were alpha tested for an assurance of basic understanding.

Questionnaire had demographic questions about respondent's age and gender. The rest of a data consist from a five individual statements rated on four-point scale of how much the respond agrees with each statement. The interval was chosen with regard to the used methods (factor analysis and cluster analysis).

The statements are:

- I do watch Polish/Czech television.
- I do listen to Polish/Czech radio.

- I do like Polish/Czech language.
- I'm interested in Polish/Czech history.
- I go to Czech Republic/Poland to no-shopping trip/vacation.

## 2.2 Data Analysis Method

Research data was obtained by interrogation and has a quantitative character. For fulfilling the aim of this paper author is using factor analysis and cluster analysis. Factor analysis is used to reduce the amount of previously mentioned statements. The new created factors are used as variables in cluster analysis. Cluster analysis is used for designing clusters of citizens from both countries. For factor analysis rotation author is using Varimax method. Those new factors were created using Kaiser's rule (Eigenvalue rules). This rule is for making sure that the number of new factors explains a sufficient amount of variability. Factor scores are created by regression and they are necessary for further cluster analysis.

Factor analysis is being used to reduce the amount of statements for further use of new data. Data are being transformed from large variation of variables into meaningful smaller sets. Factor analysis is broad-spectral tool in marketing, which can be applied in many fields, such as product research, segmentation, pricing and advertising studies etc (Malhotra, Birks and Willis, 2012).

Factor analysis has similar approach as multiple regression analysis. Factor analysis model can be represented by following equation:

$$X_i = A_{i1}F_1 + A_{i2}F_2 + A_{i3}F_3 + \dots + A_{im}F_m + V_iU_i \quad (1)$$

where,  $X_i$  =  $i$ th standardised variable

$A_{ij}$  = standardised multiple regression coefficient of variable  $i$  on common factor  $j$

$F$  = common factor

$V_i$  = standardized regression coefficient of variable  $i$  on unique factor  $i$

$U_i$  = the unique factor for variable  $i$

$m$  = number of common factors (Malhotra, Birks and Willis, 2012).

Cluster analysis is being used to classify objects or cases into comparatively homogenous groups/segments. Clustering procedures are divided into hierarchical or non-hierarchical. Hierarchical clustering can be characterised by the development of hierarchy structure (treelike structure). Non-hierarchical methods are mostly referred to k-means (which are classified as sequential threshold, parallel threshold and optimising partitioning) (Malhotra, Birks and Willis, 2012).

The next step of analysis is to create a typology of the Czech and Polish citizens (by using cluster analysis). Those types of citizens were created from the factor score. Unique typologies were created by using hierarchical cluster methods (Ward's method and Squared Euclidean distance).

By using Pearson's chi-squared test, author can describe dependency of opinions by the gender. Chi-square test is serving as a goodness-of-fit and a common contingency table tool (Hendl, 2006).

Data were put into Microsoft Office Excel, adjusted and then put into IBM SPSS Statistics 25 for proceed with analyses. All testing was performed at the 5% significance level.

### 3. Problem Solution

Analysis of data was made for Czech Republic and for Poland separately. Results of an analysis are presented in chapters 3.1 (Czech Republic) and in chapter 3.2 (Poland). Chapters include a design of typology for each researched country. Typology proposals are described at the end of a chapter (3.3).

#### 3.1 Czech Republic

This chapter is divided into reduction of factors and typology of citizens. Both of those results are shown on tables calculated by author.

##### 3.1.1 Reduction of Factors

Research included statements, here presented as factors. Dimensional reduction was made to reduce the number of factors. It was made by using factor analysis, extraction by principal components method, rotation Varimax. New factors were made by using Kaiser’s rule (Eigenvalue rule of value greater than one). Factor scores were made by using regression.

Table 1 contain information about Kaiser-Meyer-Olkin (KMO) measure. Coefficient has value 0.635. That proves that data are suitable for processing by factor analysis. It confirms the Bartlett’s test of sphericity. Signification is less than 0.05.

**Table 1: KMO and Bartlett’s Test – Czech Republic**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.635
Bartlett's Test of Sphericity	Approx. Chi-Square	217.326
	df	10
	Sig.	.000

Source: author’s calculations

Result of a factor analysis brought two new factors. It was made by Kaiser’s rule. Two new factors explain 64.9 % of total variance.

**Table 2: Rotated Component Matrix – Czech Republic**

	Component	
	1	2
S2	.910	
S1	.858	.221
S5		.760
S3	.247	.712
S4	.230	.650

Source: author’s calculations

First factor include personal interest in Polish television and radio. The second factor include travelling, the pleasure from Polish language and interest in Polish history. For the exact results see Table 2. Created factor values are being used as input variables for a typology (specific results in Table 3 under 3.1.2 Typology of citizens in Czech Republic related to polish culture).



### 3.1.2 Typology of Citizens in Czech Republic Related to Polish Culture

Hierarchical cluster analysis was made to determine the right amount of clusters. This was made by using a Ward's method and interval measure, specifically Squared Euclidean distance. By using these methods was decided to create four clusters of citizens, although there is significant imbalance in number of citizens in some clusters.

Clusters were named by the types of answers as follows: the Polish supporter, the Self-harmer, the Hater and the Unhappy traveller. There are 6.3 % of polish supporters, 0.4 % of self-harmers, 42.5 % of haters and 50.8 % of unhappy travellers. Average responses for each statements questions are shown in Table 3.

**Table 3: Attitudes to Poland by Typology – Czech Republic**

Clusters	S1	S2	S3	S4	S5
Polish supporter	2.27	2.47	1.60	1.73	1.27
Self-harmer	1.00	1.00	4.00	3.00	4.00
Hater	3.93	3.98	3.32	2.92	2.69
Unhappy traveller	3.83	3.98	2.31	2.32	1.26
Total	3.76	3.88	2.70	2.54	1.88

Source: author's calculations

Cluster called Polish supporter can be described as a people, who do like polish culture, are watching TV and listening to radio, strongly agreed to liking Polish language, are interested in polish national history and they often go to Poland to no-shopping vacations. The second cluster, Self-harmer, describes a person who is watching polish TV and listens to polish radio, despite they do not like the language, show not much of an interest in Polish history and do not go to Poland for a trip or vacation. As can be seen in Table 3, exact values are indicating that there are not many citizens, who belong into second cluster. Into third cluster called Hater belong citizens, who do not like almost everything about Poland. They do not watch Polish TV, do not listen to Polish radio, do not much like the language, are not interested into history and do not go to Poland for vacation or trip. The last and the biggest cluster called Unhappy traveller describes citizens, who do not watch Polish TV and do not listen to polish radio, are not much of fans to polish language or history, but they often go to Poland for a trip or vacation. There is no statistical significance between typology and age or gender. This shows that culture distance is not dependent and it is clearly a personal thing. Crosstabs for typology and gender is shown in Table 4. There can be seen, that the inside of clusters are almost evenly distributed between male and females. In Self-harmer cluster is only one citizen.

**Table 4: Typology of Citizens by Gender – Czech Republic**

	Gender		Total
	Male	Female	
Polish supporter	8.2 %	4.6 %	6.3 %
Self-harmer	0.9 %	0 %	0.4 %
Hater	40.0 %	44.6 %	42.5 %
Unhappy traveller	50.9 %	50.8 %	50.8 %

Source: author's calculations

### 3.2 Poland

This chapter describes the results of research in Poland. Subsection shows outputs of factor analysis and description of typology of citizens in Poland.

#### 3.2.1 Reduction of Factors

Research included same five statements as in Czech Republic. As in research in Czech Republic author used dimensional reduction to reduce the amount of statements into less factors, extraction by principal components method, rotation Varimax. These new factors were made by using Kaiser's rule (Eigenvalue rule greater than one). Scores of factors were made by using regression, same as in Czech Republic.

Coefficient Kaiser-Meyer-Olkin (KMO) has value 0.672. That value proves that data are also suitable for processing by factor analysis. It confirms the Bartlett's test of sphericity. Signification is less than 0.05. Those results can be seen in Table 5.

**Table 5: KMO and Bartlett's Test – Poland**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.672
Bartlett's Test of Sphericity	Approx. Chi-Square	75.960
	df	10
	Sig.	.000

Source: author's calculations

The inclusion of issues into the two new factors can be seen in Table 6 in rotated component matrix.

**Table 6: Rotated Component Matrix – Poland**

	Component	
	1	2
S2	.862	
S1	.842	.163
S5		.773
S3	.270	.635
S4		.620

Source: author's calculations

#### 3.2.2 Typology of Citizens in Poland Related to Czech Culture

The determination of number of cluster was made by hierarchical clustering, Ward's method and interval measure (Squared Euclidean distance). By using these methods author is describing three cluster of citizens.

The new clusters were named after agreement values with stated statements. New clusters are named: the Good neighbour, the Hater and the Traveller. There are 13.1 % of good neighbours, 35.3 % of haters and 51.6 % of travellers. Average responses are shown in Table 7.

**Table 7: Attitudes to Czech Republic by Typology – Poland**

Cluster types	S1	S2	S3	S4	S5
Good neighbour	2.55	2.30	2.25	2.60	1.45
Hater	3.96	3.83	2.85	2.85	2.48
Traveller	3.73	3.80	2.03	2.20	1.10
Total	3.66	3.61	2.35	2.48	1.63

Source: author's calculations

Good neighbours are those citizens, who are sort of interested in the other country, in this case Czech Republic. They do sometime watch Czech TV or listen to Czech radio, but it is not that often. Also, they are little bit interested in our history and appreciate our language, but they do not love it. It can be said that they do go to Czech Republic to vacations. Haters, based on the definition of a word, do not really like Czech language, they certainly do not watch Czech TV or listen to Czech radio. They are right in the middle of going or not going onto vacation in Czech Republic. Travellers can be quite often seen in Czech Republic on the vacation and they show some interest in Czech history and language. But they do not watch Czech TV and do not listen to Czech radio.

Like with Czech citizens there is no statistical significance between typology and age or gender. Crosstabs for gender and answer typology is shown in Table 8. There are more men in cluster Good neighbour and in cluster Traveller. In cluster of Haters there are evenly distributed men and women.

**Table 8: Typology of Citizens by Gender – Poland**

	Gender		Total
	Male	Female	
Good neighbour	14.0 %	11.9 %	13.1 %
Hater	31.4 %	40.3 %	35.3 %
Traveller	54.7 %	47.8 %	51.6 %

Source: author's calculations

### 3.3 Comparison of Czech Republic and Poland

The last subsection of paper compare the attitudes based on cultural distance in Czech Republic and Poland. For this purpose author is using t-test for independent groups (Czech Republic and Poland). This testing is carried out at the 5% significance level.

Same variances are in those statements: (1) I do like Polish/Czech language and (2) I'm interested in Polish/Czech history.

Same variances are not in those statements: (1) I do watch Polish/Czech television, (2) I do listen to Polish/Czech radio and (3) I go to Czech Republic/Poland to no-shopping trip/vacation.

Next step of t-test is testing of means. In those attitudes respondents from Poland and from Czech Republic have different approach (explained by means): (1) I do listen to Polish/Czech radio (Sig. 0.000), (2) I do like Polish/Czech language (Sig. 0.000) and (3) I go to Czech Republic/Poland to no-shopping trip/vacation (Sig. 0.018).

The average values for each statements are shown in Table 9. Highlighted cells are those, which have differences in between countries.

**Table 9: Compared Means by Countries**

Country	S1	S2	S3	S4	S5
Czech Republic	3.76	3.88	2.70	2.54	1.88
Poland	3.66	3.61	2.35	2.48	1.63
Total	3.72	3.77	2.56	2.52	1.78

Source: author's calculations

#### 4. Conclusion

The aim of this paper was to define consumer groups by their cultural distance to the other country. Based on their answers in questionnaire author worked with quantitative data. The questionnaire was published online and the data were collected via those questionnaires. Typology of consumers was based on statements about culture of the second country. There were five statements: I do watch Polish/Czech television, I do listen to Polish/Czech radio, I do like Polish/Czech language, I'm interested in Polish/Czech history, and I go to Czech Republic/Poland to no-shopping trip/vacation.

Respondents from Czech Republic were divided into four clusters: Polish supporter, Self-harmer, Hater Unhappy traveller. Most of them (50.8 %) are unhappy travellers, followed by haters (42.5 %). Unhappy travellers are citizens, who do not watch Polish TV and do not listen to polish radio, are not much of fans to polish language or history, but they often go to Poland for a trip or vacation.

Respondents from Poland were divided into three clusters: Good neighbour, Hater and Traveller. Most of them (51.6 %) are Travellers. Travellers can be quite often seen in Czech Republic on the vacation and they show some interest in Czech history and language. But they do not watch Czech TV and do not listen to Czech radio.

Cultural distance is a thing in both countries and it would be good to cooperate for erasing the Hater clusters and transforming them into something more positive and common.

Future research could contain more countries, or go deeper into cultural distance. Another point of view could be achieved from different questionnaire and different analysing methods, for example structural equation modelling.

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#### References

- [1] Ghemawat, P. (2001) Distance still matters. The hard reality of global expansion. *Harvard Business Review*, vol. 79, iss. 8, pp. 137-140, 142.
- [2] Gilbert, J. and Muchová, E. (2018). Export competitiveness of Central and Eastern Europe since the enlargement of the EU. *International Review of Economics and Finance*, vol. 55, pp. 78–85.
- [3] Græger, N. (2016). European security as practice: EU–NATO communities of practice in the making. *European Security*, vol. 25, iss. 4, pp. 478–501.
- [4] Hendl, J. (2006). *Přehled statistických metod zpracování dat*. Praha: Portál.

- [5] Hofstede Insights (2018). *Country comparison: Czech Republic, Poland* [online]. [cit.2018-02-20]. Available: <https://www.hofstede-insights.com/country-comparison/czech-republic,poland/>.
- [6] Langbein, J. (2014) European Union Governance towards the Eastern Neighbourhood: Transcending or Redrawing Europe's East–West Divide. *Journal of Common Market Studies*, vol. 52, iss. 1, pp. 157-174.
- [7] Malhotra, N.K., Birks, D.F. and Wills, P. (2012). *Marketing research: an applied approach*. Harlow: Pearson.
- [8] Pawlasová, P. (2016). Factors Affecting Online Group-Buying Intention in the Selected Countries of the EU: An Extended Perspective on the Theory of Planned Behaviour. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 738-745.
- [9] Shenkar, O. (2012) Cultural distance revisited:Towards a more rigorous conceptualization and measurement of cultural differences. *Journal of International Business Studies*, vol. 43, iss. 1, pp. 1-11.
- [10] Valečková, J. (2016). Attitudes to the Modern Technology in the Selected Countries of the EU. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 1043-1051.
- [11] Velčovská, Š. and Sadílek, T. (2014). Comparison of European Union quality labels utilization in Visegrad Group countries. *Journal of Central European Agriculture*, vol. 15, iss. 3, pp. 179-197.

## Fostering Innovation – a Myth or Reality of the EU in 2018

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### **Abstract**

*During a historic UN Summit in 2015, the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development (SDG) was adopted and, along with the one decade Europe 2020 strategy, became a target setting for the current EU. Interestingly, SDG 9 deals with Industry, innovation and infrastructure and calls for the fostering of innovation. The EU translates it into a demand for an increase in R&D while observing the R&D to GDP ratio – Gross domestic expenditure on research and development (GERD) index, the DESI index and European patent application for inventions. But are these goals real, legitimate, effective and efficient? Is fostering innovation a myth or reality in the EU in 2018? A law, economic and IT overview suggests that modern European integration and the single internal market with the expected vigorous and fair competition, employing modern IP, can hardly be imposed from above. The fostering of innovation demands a bottom-up and multi-stakeholder approach and a humble admission that both criteria and targets set by the EU are at least partly futile vis-à-vis the much needed fostering of innovation.*

**Keywords:** Europe 2020, innovation, sustainable development

**JEL Classification:** F63, K20, O31, O32

### **1. Introduction**

During a historic UN Summit in September 2015, the Resolution Transforming our world: the 2030 Agenda for Sustainable development (Agenda 2030) with its 17 Sustainable Development Goals (SDGs) and 169 associated targets was adopted by world leaders (UN, 2015). In January 2016, these SDGs became universally applicable in order to mobilize efforts and stimulate action towards them for the next 15 years. Since they are not legally binding per se, the states and other subjects of International law are expected to establish and employ appropriate national legal and order measures assisting in their achievement, i.e. it is well recognized that each country has the primary responsibility for its own development. SDG 9 means to build resilient infrastructures, promote inclusive and sustainable industrialization and foster innovation (SDG 9). Agenda 2030 explicitly includes within the SDG 9, the building of infrastructure to support economic development, promotion of inclusive and sustainable industrialization, increase of access of SMEs to resources and enhancement of scientific research with upgrades of technological capabilities in all countries, including the increase of the information systems and information technologies (“IS/IT”) and affordable access to the Internet (Turečková, 2016). Indeed, our post-modern global society depends upon the use of IS/IT and is marked by digitalization, aggressive competition and economic and other crises (MacGregor Pelikánová, 2013). Innovation has become an integral part of policies to promote growth, but the public financial support for (private) R&D is constrained by limited public budgets and other public factors (Blind et al., 2017). Empirical studies find that innovation activity leading to practical results came often from the private sector and tend to increase with

the size of firm (Damijan et al., 2017), a similar trend applies to the standards in Corporate Social Responsibility (“CSR”) (Adámek, 2016). The concept of economic and political integration with the dominance of technocratic over political institutions (Lianos, 2010) with the intensification of the supranational approach over the intergovernmental approach have formed both the current EU, EU law and EU decade strategies. The internal single market with the famous four freedoms is at the heart of the EU (MacGregor Pelikánová, 2017) and The EU strategy for 2000-2010 aka the “Lisbon Strategy” or “Lisbon Agenda 2000” set the highly ambitious strategic goal “to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth by 2010”. Under the auspices of the Lisbon Strategy, the EU planned on catching up and even passing the high rate of economic growth in the US (Balcerzak, 2015). Soon, it became clear that this was an unrealistic ‘mission impossible’ and the shift of the blame for that to the new accessing EU members (Wanilin, 2006) is neither fully correct nor in compliance with the EU fundamental principles. The destiny of the Lisbon Strategy was sealed by the set of crises of 2007 and 2008. The European Commission got the message and took over from the European Council the preparation of the strategy for a new decade, 2010-2020, which should have more realistic and rather IS/IT suitable goals, while paying special attention to the boost and use of innovations. On March 3, 2010, the European Commission issued the COM(2010) 2020 final Communication Europe 2020 – A strategy for smart, sustainable and inclusive growth AKA “Europe 2020” with three mutually reinforcing priorities – smart, sustainable and inclusive growth, translated into five headline targets and seven flagship initiatives. Europe 2020 is a product of a time when the European economy faced crises and post-crisis issues and the economic indicators were back to 1990s levels (Çolak & Ege, 2013). Europe 2020 attempts to address two methods of economic growth through innovation – technological competitiveness and growth accumulated by cost competitiveness (Terzić, 2017). The technological progress and innovation implemented into new technologies should be outputs of effective synergy about how Europe 2020 can act as symbiotic parallel along with the EU Competition policy (Kordoš, 2016). Hence, the first priority of Europe 2020, smart growth, requires the development of knowledge and innovation and their business use and is quantified by the target demanding that 3% of the EU’s GDP be invested in R&D. In 2010, the R&D spending in the EU reached only 2% of GDP, while the rate in the US was 2.6% and in Japan 3.4% so the European Commission implied that without an increase in this respect, the EU would sink to the second, or even lower, rank of the global order (Walburn, 2010). Agenda 2030 with the SDG 9 reacts to this pragmatic economic fear regarding the decrease of the global competitiveness of the EU as well as the sustainability and social dimension (Pakšiová, 2016). Innovation and the use of IS/IT are key areas for the European Cohesion Policy (Billon, 2017) and the SDG 9 became fully embraced by the EU, which recently issued Sustainable development in the EU – Monitoring report on progress towards the SDGs in an EU context (“Monitoring report 2017”) covering all 17 SDGs (Eurostat, 2017). This leads to the questioning of the innovation setting, namely whether the EU truly fosters innovation in 2018. What can be implied from the set legal, political and economic framework and the dynamic results of the amount of spending, as compared to the GDP, for the R&D - the GERD index? What do other indicators suggest, such as the DESI index or the data of the European Patent Office (“EPO”)? Do we have a futile, ineffective and inefficient or a real, effective, efficient, fostering of innovation? Is the fostering of innovation a myth or reality in the EU in 2018? A law, economic and IT overview suggests that modern European integration and the single internal market with the expected vigorous and fair competition employing modern IP can hardly be imposed from above. The fostering of innovation demands a bottom-up and multi-stakeholder approach and a humble admission that both criteria and targets set by the EU are at least partly futile vis-à-vis the fostering of innovation.

## 2. Problem Formulation and Methodology

Both Agenda 2030 and Europe 2020, are declared as fostering innovation. The EU, via Europe 2020, translates it into a demand for an increase in R&D, while observing the R&D v GDP ratio (GERD) index (Nevima & Kiszová, 2013). However, is the wording and spirit of Europe 2020 materialized in real life? Is it real, legitimate, effective and efficient for the EU top institutions to set such a priority, targets and flagship initiatives? Can, and does, the EU select and employ conceptually right, i.e. effective, and appropriately operating towards set goals, in short, efficient, methods in this respect? What are the results? Is fostering innovation a myth or reality in the EU in 2018? A scientific and academic assessment of SDG 9, in particular the fostering of innovation by the EU in 2018, requires an open minded selection and search of multidisciplinary primary and secondary sources from jurisdictions. The cross-disciplinary nature suggests that the data yielded by the indicated search is to be processed by Meta-Analysis (Silverman, 2013), while confronting the hard mathematical data offered by Eurostat and summarized by GERD index, DESI index and the indicative numbers of IP assets represented by European patent applications with the proclamations of the Agenda 2030 and goals of Europe 2020. GERD reflects the investment's commitment to the R&D in co-relation to the GDP, while the DESI index is a composite Digital Economy and Society Index (DESI) that summarizes some 30 relevant indicators on Europe's digital performance and tracks the evolution of EU Member States, across five main dimensions: Connectivity (25%), Human Capital (25%), Use of Internet (15%), Integration of Digital Technology (20%), and Digital Public Services (15%). The GERD index investment commitment and the DESI index digitalization use have to be appreciated in the context of innovations reaching the perhaps highest protection status – patents. The holistic perception and critical Meta-Analysis (Silverman, 2013) of the quantitative and qualitative data and methods, including confronting achieved results, with deductive and inductive aspects of legal thinking (Matejka, 2013) and interpretation of legal and political texts, offers a unique, both argumentative and axiomatic, context leading to Socratic questioning (Areeda, 1996) A law, economic and IT overview boosted by the data demonstrates the limits of the 'from the above' imposed fostering innovation in the not so harmonized EU, since cultural differences and diverse private investment in R&D readiness points to the EU of many faces, speeds and Intellectual property ("IP") commitment.

## 3. Problem Solution

Addressing the presented burning questions about the reality or fiction of the fostering innovation in the EU demands, based on the above presented contextual summary, calls for three key analyses of the SDG 9 - the evolution of the GDP v. R&D ratio – GERD index (3.1), the DESI index (3.2) and IP assets - EPO patent applications (3.3).

### ***3.1 Fostering Innovation by the R&D Spending (GERD Index) – Myth or Reality?***

It is suggested that R&D is the key variable explaining innovation (Billon, 2017) and Europe 2020 determined that the R&D spending in the EU in 2010 in the amount of only 2% of the GDP is way behind the ratio of the EU's competitors on the global market and that the EU target to be reached in 2020 is 3%, otherwise the competitiveness of the EU and EU businesses will be severely, if not irreversibly, jeopardized. The overview of the dynamics of the evolution of the GERD during the first 6 years of the Europe 2020 is instructive. Since data for 2010 does not yet reflect Europe 2020 and data for 2016 is not fully available, the dynamic observation targets the years 2011, 2013 and 2015, see Table 1.



**Table 1: R&D v. GDP (%), GERD Index, in the EU and Selected EU Member States in 2011-2015**

	2011	2013	2015	Comment
<b>EU</b>	1.97	2.02	2.04	Minimal growth
<b>Belgium</b>	2.16	2.33	2.47	Growth progress
<b>Bulgaria</b>	0.53	0.63	0.96	Growth progress
<b>Czech Republic</b>	1.56	1.90	1.93	Growth progress
<b>Denmark</b>	2.94	2.97	2.96	Stagnation
<b>Germany</b>	2.80	2.82	2.92	Slow growth
<b>Greece</b>	0.67	0.81	0.97	Progressive growth
<b>Spain</b>	1.33	1.27	1.22	Slow decrease
<b>France</b>	2.19	2.24	2.27	Slow growth
<b>Italy</b>	1.21	1.31	1.34	Slow growth
<b>Finland</b>	3.64	3.29	2.90	Decline, but mtg target
<b>Sweden</b>	3.25	3.31	3.27	Stagnant, but mtg target
<b>United Kingdom</b>	1.67	1.65	1.67	Stagnation

Source: prepared by the author based on Eurostat data (Eurostat, 2018)

Since in 2015, the GERD of the USA was 2.79%, of Japan 3.4% and of South Korea 4.29% (Eurostat, 2018), then Europe 2020 seems to have selected an effective target of the GERD of 3%. At the same time, it is highly questionable how realistic and efficient is it. According to one of the 7 flagship initiatives of the Europe 2020, the aim is to re-focus R&D and innovation policy on the challenges facing our society, the Commission has to launch and complete various programs while EU member states should reform national R&D and innovation systems and prioritise knowledge expenditure, namely promote greater private R&D investments. In the light of sustainability and inclusion, it is of a high concern that basically each EU member state slowly oscillates around its amount of GERD and there is neither a generally increasing trend nor a unification trend. Unless the EU rejects the indicative value of GERD for the innovation fostering, the semi-conclusion emerges that innovation fostering in the EU, while considering the investment aspect, is a myth. Even, it can be argued, that this myth is caused by a misunderstanding of the EU competencies and capacities, i.e. Europe 2020 endeavours towards SDG 9 are not succeeding due to the lack of the *de iure* and *de facto* power of the EU and EU institutions powers (Pasimeni & Pasimeni, 2016) and generally legality in this respect. Based on the GERD dynamics, Europe 2020 aims vainly to increase the EU's innovation drive and global competitiveness (Erixon, 2010). However, the expenditure on R&D cannot be treated mechanically as a guaranty of building and fostering innovation (Balcerzak, 2015). Also, the public and private R&D investments are complementary rather than substituting (Hammadou, 2014) and the role of involvement of the educational system and academia is not be underestimated, instead the awareness needs to be increased (Staničková, 2016). There is a competence deficit and the GERD 3% issues are merely arbitrary and incidental indicators and that instead the fostering innovation reality of the EU should be measured based on true outcomes, and not on the money invested and spent pursuant to the EU command, namely on digitalization and IP protected assets.

### **3.2 Fostering Innovation by the Digitalization (DESI Index) – Myth or Reality?**

The DESI index testifies about advanced digital economies, which is perceived as highly needed for an IS/IT success and competitive advantage in the global marketplace. Since

Europe 2020 explicitly deals with the single internal Digital market, and one of its seven flagship initiatives is the digital agenda for Union, it can be well argued that fostering innovation in the EU pursuant to Agenda 2030 and Europe 2020, especially vis-à-vis the SDG, has to be reflected by the DESI index and the EU member state's ranking.

**Table 2: DESI Rating of the EU and Selected EU Member States in 2017**

DESI index	Over 0,6	0,5-06	0,4-0,5	0,3-0,4
States	DK, FI, SE, NL, LU	BE, UK, IE, EE, AT, DE, ES, PT	CZ, SK, HU, PL, IT	EL, BG, RO

Source: prepared by the author based on DESI index charts and information (EC, 2017)

The DESI scores presented in Table 2 represent a wide diversity between EU member states, but does not provide a great deal of information about fostering innovation. However, this can be achieved by an analysis of each of the 5 main dimensions. Firstly, in re connectivity, the best is NL, LU and BE, and the weakest BG and PL, while in general the number of high-speed connections reaches 75%. Secondly, for Human capital – digital skills, DK, LU, FI, SW, NL excel, while BG, EL, IT fail. Although 79% of Europeans go online at least once per week, 44% of Europeans still do not have basic digital skills. Thirdly, regarding the use of the Internet by citizens, the highest activities go to DK, SW, LU and LU and, again, lagging way behind is RO, BG and IT. Interestingly, 70% of Internet users read news online, 66% shop online, 59% do e-banking. Fourthly, regarding the integration of Digital Technology by businesses, the best results are achieved in DK and FI, while bringing up the rear are RO, PL and BG. Although European businesses are increasingly adopting digital technologies, such as the use of a business software for electronic information sharing (from 26% in 2013 to 36% of enterprises in 2015), sending electronic invoices (from 11% in 2014 to 18% of enterprises in 2016) or using social media to engage with customers and partners (from 14% in 2013 to 20% of enterprises in 2016), these results are not impressive. Even worse is the extremely low level and slow growth of the e-commerce by SMEs going from 15% in 2014 to 17% of SMEs in 2016. Fifth, regarding digital public services, the best in e-government and related services are EE, FI and NL, the worst RO, HU and HR. In general, the availability of online e-public services went from 75% in 2014 to 82% in 2016, but their real use reached only slightly over 30% (EC, 2017). Well, the EU member states and their subjects follow different legal, cultural, and other traditions (MacGregor Pelikánová et al., 2017) and share a diverse attitude to the IS/IT. The message about the Digitalization and DESI adds to the already identified insufficient investment in innovation (see GERD index) the grim results about the transposition and implementation of innovation in the IS/IT environment in the current society. This lends credence in re a deep problem of the EU and Europe 2020, and especially the fact that SMEs, instead of becoming more competitive thanks to innovations, are actually weakly involved in digitalization. Nevertheless, it can still be argued that the Agenda 2030 and Europe 2020 are leading to an effective and efficient fostering in the EU, due to the fact that many vibrant and competitive advantage generating IP assets are produced and benefit by the law protection. Is this truth or wishful thinking?

### **3.3 EPO IP Assets as the Evidence About Fostering Innovation– Myth or Reality?**

Monitoring the report 2017, reflecting the meeting of goals set by Europe 2020 and Agenda 2030, addresses the SDG 9 while using the above discussed GERD index, the employment in the IS/IT sector and the number of R&D personnel with, as yet, inconclusive data, and the number of patent applications to the EPO (Eurostat, 2017). Well, fostering innovation should

lead to positive IP outcomes, i.e. IP protected assets and innovation are often matched by an actual invention, and the best evidence and protection for an invention is a granted patent. Hence, it seems appropriate to measure the EU's fostering of innovation by the number of inventions for which a patent was granted. Therefore, it is definitely relevant to consider the data on patent applications to the European patent office, namely the number of patent applications filed with the EPO in general and by EU member states.

**Table 3: Total Number of Patent Applications (in Thousands) to the EPO in 2011-2014**

Year	2011	2012	2013	2014	Comment
<b>Patent applications</b>	57.5	56.8	56.7	56.7	

Source: prepared by the author based on Monitoring report 2017 (Eurostat, 2017)

The number of patent applications by EU subjects to the EPO has been stagnating, while the GERD index and DESI index have been going up. It must be emphasized that subjects from the EU member states with the highest GERD had the highest number of patent applications per capita (Eurostat, 2017). To reach a deeper understanding of this, the number of patent applications filed in 2011-2014 needs to be broken down by the EU member states of these applicants, and confronted with the number of granted patents in 2016. This time gap was selected based on the experience that the EPO patent proceedings often last 2-5 years, i.e. the EPO granted patents in 2016 based on applications filed generally in 2011-2014.

**Table 4: Number of Patent Applications and Granted Patents by EPO by Selected EU Member States**

Patent applications per state and year	2011	2012	2013	2014	Comment – 2016 granted patents
<b>Belgium</b>	2014	1886	1882	1927	1114
<b>Bulgaria</b>	16	13	23	34	11
<b>Czech Republic</b>	162	140	151	167	95
<b>Denmark</b>	1782	1605	1942	1983	1033
<b>Germany</b>	26202	27249	26510	25633	18728
<b>Greece</b>	78	79	68	95	39
<b>Spain</b>	1404	1544	1504	1471	752
<b>France</b>	9617	9897	9835	10614	7032
<b>Italy</b>	3970	3744	3706	3649	3207
<b>Finland</b>	1548	1851	1894	2482	1081
<b>Sweden</b>	3638	3518	3674	3873	2661
<b>United Kingdom</b>	4746	4716	4587	4764	2931

Source: prepared by the author based on EPO data (EPO, 2018)

This leads to a logical conclusion that EU member states which spend more on R&D, as witnessed by the GERD index, generally benefit by a more developed and wider spread digitalization, as witnessed by the DESI index, and have subjects which generate more EPO applications and even granted patents. However, some limitations need to be presented. First, the eagerness to file an application with the EPO does not always mirror the well supported and fostered innovation drive. It is more reliable to consider only the successful applications, i.e. patents granted by the EPO. Second, a patent is not always the preferred method and instrument for IP protection and SMEs often use business secrets, contracts, unfair competition and other regimes. Third, patented innovations which do not manage to pass the Rubicon and

became employed in praxis could hardly be considered as a demonstration of effective and efficient innovation fostering. Fourth, there are as well other patents to be obtained, i.e. there is a choice between national, regional and international patents and so the EPO is not the only institution granting valuable patents with a possible scope of use in the EU. Last, and perhaps most importantly, the IS/IT sphere is very different and distant from traditional industrialization. Computer programs, software and other instruments and platforms to be used by post-modern society in the global environment are excluded from patent protection and instead are a subject matter of copyright and other law mechanisms.

#### 4. Conclusion

Pursuant to Europe 2020, Agenda 2030 and other strong strategic and/or legal documents, the EU takes seriously SDG 9 and hence has taken since 2010 a very strong commitment to support effective and efficient fostering innovation. However the official data provided by the EU, such as the GERD index, DESI index and EPO application and patent numbers show a very different picture. The post-Lisbon EU and its internal signal market desperately need a vigorous and fair competition employing modern IP assets, which are outcomes of effective and efficient fostering innovations. However, all plans and goals set by the EU and its top institutions in this respect do not lead to such a result. The differences between EU member states remain and EU member states appearing as champions of fostering innovation have reached such results rather thanks to the long ongoing bottom-up, multi-stakeholder and national approach. Germany and the Northern states do better in all accounts vis-à-vis innovation fostering than other EU member states. The differences between EU member states show no signs of diminishing and the indexes and data about the fostering innovation trends are not unanimously going up. It appears that proclamations and declarations of the EU are mere wishes for the setting and imposing, but they lack both the competence and capacity. Fostering innovation was and remains in hands of the EU member states or more specifically in the hands of Europeans. All stakeholders, including the EU, EU key institutions and EU leaders, have to humbly accept that even the best meant requirements and targets set by the EU are at least partly futile vis-à-vis the much needed fostering of innovation, that the endorsed indexes are merely indicative and that fostering innovation is a complex process needed to be done while taking an open-minded and bottom-up approach. The EU should implement policies on organizational and institutional improvements and incentives for stimulating inter-organizational collaborations, i.e. promote open-minded institutional efficiency, reduction of institutional barriers (De Noni et al., 2018), industry 4.0 trend and the involvement of businesses, including SMEs. Regarding fostering innovation (and not only about that), the EU should be the facilitator, not the directive organizer. So far, fostering innovation in the EU and the related discussions are oscillating between chimerical myths of the all knowing and ordering EU and pragmatic reality and this is hardly reconcilable with the Europe 2020 proclaimed smart, sustainable and inclusive growth.

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## References

- [1] Adámek, P. (2016). Consequences of Corporate Social Responsibility Approach in Voluntary European and Global “Responsible” Initiatives. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 19-27.
- [2] Areeda, Ph.E. (1996). The Socratic Method. *Harvard Law Review*, vol. 109, iss. 5, pp. 911-922.
- [3] Balcerzak, A.P. (2015). Europe 2020 Strategy and Structural Diversity Between Old and New member States, Application of Zero Unitarization Method four Dynamic Analysis in the Years 2004-2013. *Economics and Sociology*, vol. 8, iss. 2, pp. 190-210.
- [4] Billon, M., Marco, R., Lera-Lopez, F. (2017). Innovation and ICT use in the EU: an analysis of regional drivers. *Empirical Economics*, vol. 53, iss. 3, pp. 1083-1108.
- [5] Blind, K., Petersen, S., Riillo, C.A.F.(2017). The impact of standards and regulation on innovation in uncertain markets. *Research Policy*, vol. 46, pp. 249-264.
- [6] Çolak, M.S. & Ege, A. (2013). An Assessment of EU 2020 Strategy: Too Far to Reach? *Social Indicators Research*, vol. 110, iss. 2, pp. 659-680.
- [7] Damijan, J., Kostevc, Č., Rojec, M. (2017). Exporting status and success in innovation: evidence from CIS micro data for EU countries. *The Journal of International Trade & Economic Development*, vol. 26, iss. 5, pp. 585-611.
- [8] De Noni, I., Orsi, K., Belussi, F. (2018). The role of collaborative networks in supporting the innovation performances of lagging-behind European regions. *Research Policy*, vol. 47, pp. 1-13.
- [9] EPO (2018). *European patent applications 2007-2016 per country of residence of the applicant* [online]. [cit.2018-02-28]. Available at: <http://www.epo.org/about-us/annual-reports-statistics/statistics.html#applications>
- [10]Erixon, F. (2010). *The Europe 2020 strategy: time for Europe to think again*. *European view*, 9:29.
- [11]European Commission (2017). *DESI 2017* [online]. [cit.2018-02-28]. Available at: <https://ec.europa.eu/digital-single-market/en/desi>
- [12]Eurostat (2018). *GERD* [online]. [cit.2018-02-28]. Available at: [http://ec.europa.eu/eurostat/tgm/table.do?tab=table&plugin=1&language=en&pcode=t2020\\_20](http://ec.europa.eu/eurostat/tgm/table.do?tab=table&plugin=1&language=en&pcode=t2020_20)
- [13]Eurostat (2017). *Sustainable development in the EU – Monitoring report on progress towards the SDGs in an EU context, 2017 ed.* [online]. [cit.2018-02-28]. Available at: <http://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-04-17-780>
- [14]Hammadou, H., Paty, S., Savona, M. (2014). Strategic interactions in public R&D across European countries: A spatial econometric analysis. *Research Policy*, vol. 43, pp. 1217-1226.
- [15]Kordoš, M. (2016). Effects of the EU Competition Policy and Strategy Symbiosis. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 472-479.

- [16] Lianos, I. (2010). Shifting Narratives in the European Internal Market: Efficient Restrictions of Trade and the Nature of “Economic” Integration’. *European Business Law Review*, vol. 21, iss. 5, pp. 705-760.
- [17] MacGregor Pelikánová, R. (2017). European Myriad of Approaches to Parasitic Commercial Practices. *Oeconomia Copernicana*, vol. 8, iss. 2, pp. 167-180.
- [18] MacGregor Pelikánová, R. (2013). Internet My Dearest, What Type of European Integration Is The Clearest? *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, vol. 61, iss. 7, pp. 2475-2481.
- [19] MacGregor Pelikánová, R., Císařová, J., Beneš, M. (2017). The misleading perception of the purpose of the protection against misleading advertising by the EU law and its impact on the Czech Republic. *Lawyer Quarterly*, vol. 7, iss. 3, pp. 145-161.
- [20] Matejka, J. (2013). *Internet jako objekt práva – Hledání rovnováhy autonomie a soukromí*. Praha: CZ.NIC.
- [21] Nevima, J., Kiszová, Z. (2013). Multiplicative and Additive Approach in Analytic Hierarchy Process – Case Study of Competitiveness Evaluation of Czech and Slovak Regions. *International Journal of Mathematical Models and Methods in Applied Sciences*, vol. 7, iss. 5, pp. 490-499.
- [22] Pakšiová, R. (2016). Understanding of corporate social responsibility in large companies in Slovakia within the context of a sustainable development. In *Economic policy in the European union member countries. International scientific conference*. Karviná : School of Business Administration in Karvina, SU in Opava, pp. 516-525.
- [23] Pasimeni, F. & Pasimeni, P. (2016). An Institutional Analysis of the Europe 2020 Strategy. *Social Indicators Research*, vol. 127, pp. 1021-1038.
- [24] Staničková, M. (2016). Practical Aspects of EU Project and Grant Management in Programming Period 2014-2020. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 898-907.
- [25] Silverman, D. (2013). *Doing Qualitative Research – A Practical Handbook*. 4th Edition, London, UK: SAGE.
- [26] Terzić, L. (2017). The Role of Innovation in Fostering Competitiveness and Economic Growth: Evidence from Developing Economies. *Comparative Economic Research*, vol. 20, iss. 4, pp. 65-81.
- [27] Turečková, K. (2016). Sectoral specialization as a source of competitiveness: case study on ICT sector in V4+ countries. In: *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB-TU Ostrava, pp. 1023-1029.
- [28] United Nations (2017). *Transforming our world: the 2030 Agenda for Sustainable Development* [online]. [cit.2018-02-28]. Available at: <https://sustainabledevelopment.un.org/post2015/transformingourworld>
- [29] Wanilin, A. (2006). *The Lisbon Scorecard IV: Will Europe’s Economy Rise Again?* London: Center for European Reform.
- [30] Walburn, D. (2010). Europe 2020. *Local Economy*, vol. 25, iss. 8, pp. 699-702.

## Evaluation of Competitive Position of the Hungarian Agri-Food Product Groups on the Market of the European Union

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### **Abstract**

*The agri-food trade of Hungary with the EU has increased since the accession. The goal of paper is to examine the competitiveness of the Hungarian agri-food product groups on the EU market. The data came from the COMEXT database of the European Commission, regarding the period between 2004 and 2016. To evaluate the competitiveness of agri-food product groups the price–quality method was chosen. Two of the Hungarian agri-food product groups were part of the successful quality competition segment that is meat and meat preparations as well as sugar, sugar preparations. Successful price competition segment encompassed the group of cereals and cereal preparations. The trade with EU highlights a problem that the proportion of raw materials and low added-value products in the Hungarian agri-food export are high. We create jobs abroad, not at home. The export should be improved by producing own-brand food products with high added value. Governmental interventions have also a key role in the enhancement of competitiveness.*

**Keywords:** added-value, agri-food trade, competitiveness, EU market

**JEL Classification:** F14, L16, Q17

### **1. Introduction**

The agri-food industry is an important economic sector of the Hungary with great traditions. Due to the favourable natural endowments the country is capable of producing food products with excellent quality valuable for the market and competitive in foreign markets (Magda, 2008). In general, the accession had a positive impact on the Hungarian agri-food sector. It resulted in a consolidation of production, higher current prices, higher export and import quantities, and especially higher farmers' incomes (Csáki and Jámbor, 2009; Potori et al., 2014). Hungary's joining to the European Union has brought a lot of advantages. In the case of foreign agricultural trade the possibility of expansion has opened after the integration, and so would be able to build and stabilise new trading relations (Vásáry and Vasa, 2015). The 2004 accession reduced the barriers to bilateral trade with the EU Member States. The EU membership itself allowed the free movement of goods within the new Member States where the framework conditions for trade are determined by the Common Commercial Policy of the EU. (Vásáry et al., 2012; Fojtiková, 2014; Constantinovits and Sipos, 2016).

The Hungarian agri-food export has increased since the accession to the EU with the exception of the year 2009. This paper focused on the development of agri-food trade between Hungary and the EU since 2004. In the article the European Union (EU) means all the members including the new ones. Other goal of paper was to evaluate the competitiveness of the Hungarian agri-food product groups on the market of the European Union. The agri-food trade with EU has increased dynamically, however, the analysis points out the problems of the Hungarian agri-food trade.

## 2. The State of the Hungarian Food Industry

The food industry proved to be a big loser of EU accession. The output of food industry declined by more than 20% since 2004. Currently, it is the third largest sector within the processing industry, which aptly indicates its importance. The production value of the food business amounted 9 billion euro in 2017. The dominant branch of the food industry is the food production with 84% share. Besides, the beverage production has a share 15% percent and tobacco production has a share 1% in the food output. Approximately, 60% of the food sales are domestic and 40% are exported. The proportion of employees in the Hungarian food industry is stable compared to the national economy and accounts for about 140,000 people. (Hungarian Statistical Office 2017) The main characteristics of the food industry are shown in Table 1.

**Table 1: The State of the Agri-Food Sector in the Hungarian Economy**

year	Food industry			Food. Beverages and Tobacco			Consumer price index (previous year = 100%)	
	In employment (%)	in GDP (%)	investment (%)	in Consumption (%)	in Export (%)	Trade balance (million €)	Food	Total
2004	3.6	2.4	3.7	26.1	6.0	888	106.5	106.8
2005	3.6	2.3	3.6	25.1	5.8	728	102.5	103.6
2006	3.6	2.2	3.1	25.8	5.5	808	107.7	103.9
2007	3.4	2.0	3.2	24.2	6.3	1435	111.5	108.0
2008	3.3	1.9	2.5	27.1	6.7	1487	110.2	106.1
2009	3.5	2.2	2.5	28.0	7.2	1226	104.4	104.2
2010	3.5	2.0	3.0	27.5	6.9	1685	103.2	104.9
2011	3.3	1.9	3.3	28.5	7.2	2127	106.6	103.9
2012	3.3	1.9	2.8	26.8	10.1	2645	105.9	105.7
2013	3.4	2.0	2.6	27.7	9.8	2745	102.8	101.7
2014	3.5	2.0	2.9	28.6	9.1	2375	99.6	99.8
2015	3.3	1.9	2.3	29.3	8.7	2359	100.9	99.9
2016	3.3	-	3.7	29.6	8.6	2070	100.7	100.4

Source: based on the data of Hungarian Statistical Office 2017

The agribusiness have a more important role in the national economy than agriculture and food industry together. Agricultural economy involves not only agriculture, forestry, and fishing, but also food processing as well, while agribusiness includes all activities that come before or follow agricultural processes. The food industry has a share of about 2% in the GDP. The agriculture and other activities (artificial fertilizer and pesticide production, agricultural



machinery and component production and distribution, as well as agricultural trade, transportation, education, research, etc.) represent another 12% in the GDP thus agribusiness has a share of about 14% in the GDP. (Hungarian Statistical Office 2017)

### 3. Material and Methods

The data of analysis come from the database of the European Commission (in COMEXT system) regarding the period between 2004 and 2016. Trade flows are aggregated according to the product groups (main groups of SITC classification) and according to the partners (Hungary, European Union). In our survey “agri-food product group” refers to food and live animals; beverages and tobacco (SITC 0 and 1).

The term competitiveness is commonly used in the economic research and also in public debate. Competitiveness can be defined as the ability to face competition and to be successful. Competitiveness would then be the ability to sell products that meet demand requirements (price, quality, quantity) and, ensure profits over time that enable the firm to thrive. Competitiveness is a relative measure. It is, however, a broad concept and there is no agreement on how to define it, nor how to measure it precisely. (Latruffe, 2010) The competitiveness of estimation results show that the connection between quality and agri-food export performance clearly depends on the product category and country (but not on the period) and differs, but not in all cases, according to the export destination. (Fischer, 2007)

To evaluate the competitive positions of Hungarian agri-food product groups on EU market we chose the price–quality method. This concept, was developed by Aiginger (1997, 1998) to evaluate whether the external performance of a given country depends on price competitiveness or non-price competitiveness. Bojnec and Fertő (2008) combined export-to-import unit values and trade balance by product for assessing price competition and product quality in trade. Application of the two variables allows us to categorize the product groups into four segments:

Category 1 - Unsuccessful quality competition. Trade deficit is achieved at higher export price than import price.

Category 2 - Successful quality competition. Trade surplus is achieved at higher export price than import price.

Category 3 - Unsuccessful price competition. Trade deficit is achieved at lower export price than import price.

Category 4 - Successful price competition. Trade surplus is achieved at lower export price than import price. The essence of the method is shown in Table 2.

**Table 2: Competitiveness Matrix**

Relation between export unit value and import unit value	Trade balance	
	$X_j < M_j$ (trade deficit)	$X_j > M_i$ (trade surplus)
$UV^x > UV^m$	unsuccessful quality competition (1)	successful quality competition (2)
$UV^x < UV^m$	unsuccessful price competition (3)	successful price competition (4)

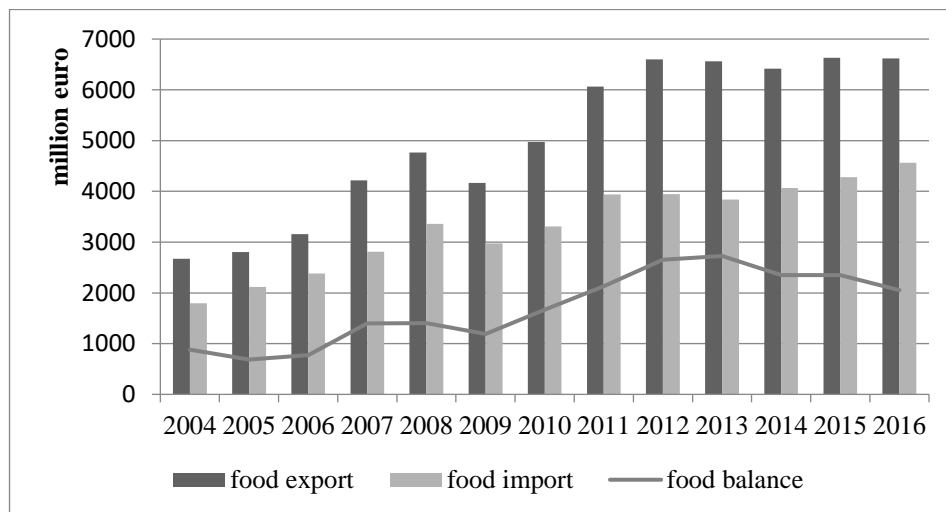
Source: own elaboration based on Poór (2010)

where  $X_j$  means export of a given group,  $M_j$  means import a given group; the  $UV^x$  is the export unit value and the  $UV^m$  is the import unit value. It should be noticed that the term „quality” does not mean quality in technological terms, but in economic term as higher price is assumed to reflect higher quality.

#### 4. Results and Discussion

The European Union is a very important exporter and importer of agri-food products in the world (its share in global trade in food amounts to 41%), and about 72% of the value of trade of the EU agri-food sector takes place as part of intra-EU trade (Figiel et. al., 2014). The development of degree of openness of Hungary (and the Visegrad4 countries as well) has been increasing since the change of regime. (Majerová and Nevima, 2014). The Hungarian agri-food export has increased since the accession to the EU with the exception of the year 2009. While the value of Hungarian agri-food export was 2.7 billion euro in 2004, Figure 1 shows an increase to 6.6 billion euro by 2016. However, the dynamism of the growth rate weakened in 2012 and it has been stagnating ever since. A similar trend can be seen on the import side. The import of agri-food products has been also increasing, in such rate like the export. In the year of the EU accession the value of Hungarian agri-food import was 1.8 billion euro then it increased almost two and a half times and in 2016 it amounted to 4.6 billion euro. On this basis the entire agri-food trade balance rose from 880 million euro (2004) to 2.05 billion euro (2016). Another important fact is that 84% of the agri-food trade are now completed in the European Union. After the accession the Hungarian agricultural trade increasingly shifted towards the European Union but the EU membership had no impact on the product structure (Jámbor and Vásáry, 2014). (Figure 1.)

**Figure 1: The Development of Hungary's Food Trade with EU (2004-2016)**



Source: own edition on the basis of Eurostat data, 2017

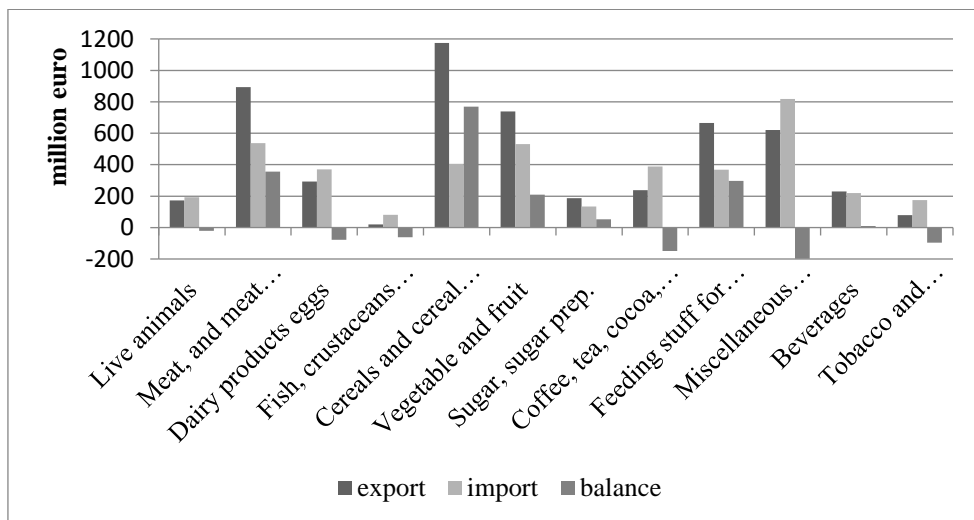
Hungary was one of the countries that could maintain a positive balance of foreign trade throughout the whole period. (Rajcániová, 2012) However, agricultural trade with the EU grew much more dynamically than Hungary's total trade with the EU or the total agricultural trade of Hungary (Hegedűs and Kiss, 2014). The increasing of food trade since 2004 on the market

of EU is not only a Hungarian phenomenon, several other postcommunist European countries (eg. Poland) have also increased the food trade (Firlej et al., 2017).

The export of agri-food goods is dominated by a small number of products, the import is concentrated to a lesser extent. The five greatest commodity groups – cereals and cereal preparations; meat and meat preparations; vegetables and fruit; feeding stuff for animal as well as miscellaneous edible products and preparation – contributed by 77 percent to the total agri-food export.

The five agri-food product groups with the greatest import values - miscellaneous edible products and preparation; meat and meat preparations; vegetables and fruit; cereals and cereal preparations as well as coffee, tea, cocoa and spices – represented 63% of the total agri-food import in 2017. The balance trade of cereals and cereal preparations (+770 million euro); the group of meat and meat preparations (+356 million euro); the feeding stuff for animal products (+297 million euro) as well as vegetables and fruit (208 million euro) with European Union is positive. The balance is negative in the case of miscellaneous edible products and preparation (-198 million euro); coffee, tea, cocoa (-149 million euro); tobacco and tobacco manufactures (96 million euro) and dairy products (-77 million euro). (Figure 2.)

**Figure 2: The State of Agri-Food Trade Between Hungary and the European Union by Product Groups (2016)**



Source: own edition on the basis of Eurostat data, 2017

## 5. Evaluation of Competitiveness

The main source of the increase in Hungarian food industry exports to the analysed markets is the general increase of the imports there. (Juhász and Wagner, 2013) We can state that only a few Hungarian agri-food product groups were competitive on the market of the European Union. Two Hungarian products groups belonged to the successful quality competition segment (2). These are the meat and meat preparations; sugar, sugar preparation and honey. It means that export quantities of products exceeded the import quantities despite higher unit values in exports than in imports. Between 2004 and 2014 the group of live animals was also part of this segment, but then it proved to be unsuccessful quality competitive. Successful

price competition segment (4) encompassed two product groups, that is cereals and cereal preparation as well as vegetable and fruit in the period 2007 and 2016 (except the year 2009 and 2012). It means that the Hungarian positive trade balance is achieved with lower export price than import price. Two Hungarian product groups belonged to the unsuccessful quality competition segment (1). These are coffee, tea, cocoa, spices and the miscellaneous edible products and preparation in the second period (2010-2016). These groups showed negative trade deficit with higher unit values in exports than in imports. The unsuccessful price competition segment (3) contained the dairy products eggs (since 2008) and the fish, crustaceans molluscs preparation (since 2010). In this case the Hungarian negative agri-food trade balance is achieved with lower export price than import price. (Table 3.)

**Table 3: Competitiveness Matrix of the Hungarian Agri-food Product Groups on the Market of European Union in 2004-2016**

HS	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
00	2	2	2	2	2	2	2	2	2	2	2	1	1
01	2	2	2	2	2	2	2	2	2	2	2	2	2
02	1	4	4	4	3	3	3	3	3	3	3	3	3
03	1	1	1	3	1	1	3	3	3	3	3	3	3
04	2	4	4	4	4	4	4	4	4	4	4	4	4
05	2	4	2	4	4	2	4	4	2	4	4	4	4
06	2	2	2	2	2	2	2	2	2	2	2	2	2
07	1	1	1	1	2	2	1	1	1	1	1	1	1
08	2	2	1	1	1	2	1	2	2	2	4	4	4
09	1	2	4	2	2	2	1	1	1	1	1	1	1
11	1	3	3	1	3	3	4	2	4	2	2	2	4
12	1	2	3	3	3	2	1	1	1	2	1	1	1

00 Live animals, 01 Meat, and meat preparation, 02 Dairy products eggs, 03 Fish, crustaceans molluscs preparation, 04 Cereals and cereal preparation, 05 Vegetable and fruit, 06 Sugar, sugar preparation and honey, 07 Coffee, tea, cocoa, spices, 08 Feeding stuff for animals, 09 Miscellaneous edible products and preparation, 11 Beverages, 12 Tobacco and tobacco manufactures

Source: Own calculation based on European Commission COMEXT database

In case of three product groups the competitiveness exactly cannot be detected. These are feeding stuff for animals; tobacco and tobacco manufactures as well as beverages.

## 6. Conclusion

One of the consequences of the growth in Hungarian agri-food exports is that Hungary has become highly dependent on the EU as an export market. The leading role of cereals is evident as Hungary is traditionally a country where maize, wheat, barley, sunflower and oilseed rape production exceeds domestic demand. The Hungarian animal stock decreased and the oilseed area increased as a result of the expansion of the EU biofuel industry. The major role of meat in Hungarian exports has been taken over by cereals. On the basis of price-quality method two Hungarian agri-food product groups were part of the successful quality competition segment, that is meat and meat preparations as well as sugar, sugar preparations. Successful price

competition segment encompassed the group of cereals and cereal preparations. Analysing the agri-food trade between Hungary and EU since accession we can conclude that there is a lot to do to improve the competitiveness of Hungarian agri-foods. The trade with European Union highlights a problem that concerning different product groups the proportion of raw materials in our food export is high, while we import agri-food products of high added-value. We create jobs abroad, not at home. The export should be improved by producing own-brand food products with high added value. Governmental interventions (e.g. in improving the labour market situation of the sector) have a key role in the enhancement of competitiveness. Besides, the governmental policies should promote the small and medium-sized Hungarian businesses to produce more quality competitive products.

## References

- [1] Aiginger, K. (1997). The use of unit values to discriminate between price and quality competition. *Cambridge Journal of Economics*, vol. 21, pp. 571-592.
- [2] Aiginger, K. (1998). A framework for evaluating the dynamic competitiveness of countries. *Structural Change and Economic Dynamics*. Austrian Institute of Economic Research and University of Linz. vol. 9 , iss. 2, pp. 159-188.
- [3] Bojnec, S., Fertő, I. (2008). Price Competition vs. Quality Competition: The Role of One-Way Trade. *Acta Oeconomica*. vol. 58 , iss.1, pp. 61-89.
- [4] Constantinovits, M. and Sipos, Z. (2016). *Nemzetközi üzleti technikák*. Budapest: Akadémiai kiadó.
- [5] Csáki, Cs. and Jámbor, A. (2009). The Diversity of Effects of EU Membership on Agriculture in New Member States. *Policy Studies on Rural Transition No. 2009-4*. FAO Regional Office for Europe and Central Asia. [online]. [cit. 2017-11-13] Available at: <http://www.fao.org/docrep/017/aq336e/aq336e.pdf>.
- [6] Figiel, Sz., Hamulczuk M., Klimkowski C. , Kufel J. (2014). Potential Trade Implications of Joining the Euro Zone for the Polish Agro-food Sector. [online]. [cit. 2017-11-17] Available at: [http://ageconsearch.umn.edu/bitstream/182836/2/14th\\_EAAE\\_Congress\\_Paper-828.pdf](http://ageconsearch.umn.edu/bitstream/182836/2/14th_EAAE_Congress_Poster_Paper-828.pdf).
- [7] Fírléj, K., Kowalska, A., and Piwowar, A. (2017). Competitiveness and innovation of the Polish food industry. *Agricultural Economics - Czech*. vol. 63, iss. 11, pp. 502-509.
- [8] Fischer, C. (2007). Food quality and product export performance. An empirical investigation of the EU situation. EAAE Seminar 'International Marketing and International Trade of Quality Food Products', [online]. [cit. 2017-11-23] Available at: [http://www.bean-quorum.net/EAAE/pdf/EAAE105\\_Paper030.pdf](http://www.bean-quorum.net/EAAE/pdf/EAAE105_Paper030.pdf)
- [9] Fojtíková, L. (2014). Foreign Trade of the Czech Republic after Ten Years of Membership in the European Union. In *International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, Faculty of Economics, Department of European Integration, pp. 127-137.
- [10] Hegedűs, Zs., and Kiss, J. (2014). The impact of ten years of European Union membership on Hungarian agricultural trade. *Studies in Agricultural Economics*, vol. 116, iss. 2, pp. 87-94.

- [11] Jámbo, A. and Vásáry, M. (2014). A magyar agrárkereskedelem tíz évvel a csatlakozás után. *Gazdálkodás*, vol. 58., iss. 3., pp. 237–246.
- [12] Juhász, A. and Wagner, H. (2013). An analysis of Hungarian agri-food export competitiveness. *Studies in Agricultural Economics*, vol. 11, pp. 150–156.
- [13] Latruffe, L. (2010). Competitiveness, Productivity and Efficiency in the Agricultural and Agri-food Sector. [online]. [cit. 2017-11-23] Available at: <http://www.oecd-ilibrary.org/docserver/download/5km91nkd6d6-en.pdf?expires=1518861296&id=id&accname=guest&checksum=0B1650F188E6BDEF20A316EA324D8E98>
- [14] Magda, R. (2008). A magyarországi természeti erőforrások gazdaságtana és hasznosítása. Budapest: Mezőgazda Kiadó.
- [15] Majerová, I., Nevima, J. (2014). The Issue of Competitiveness: A Case of Visegrad Group Plus Countries. In *International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, Faculty of Economics, Department of European Integration, pp. 572-583.
- [16] Poór, J. (2010). Érték- és áralapú módszerek a külkereskedelmi versenyképesség mérésében a magyar hústermékek külkereskedelmének példáján. Doctoral thesis. Keszthely: Pannon University.
- [17] Potori, N., Chimelinski P. and Karwat-Wozniak, B.(2014). A comparison of the agri-food sectors in Poland and Hungary from a macro perspective. In Potori, N., Chimelinski, P. and Fieldsend, A. (eds.). *Structural changes in Polish and Hungarian agriculture since EU accession: lessons learned and implications for the design of future agricultural policies*. Budapest: Research Institute of Agricultural Economics, pp. 9-23.
- [18] Rajcaniova, M. (2012). V4 Food Trade and Market Insights: from Economic Theory to Consumer's Reality. In Horská E. et al. (eds). *Food Sciences and Business Studies. Global – Regional – Local Approach*. Nitra: Slovak University of Agriculture in Nitra. pp. 25-43.
- [19] Vásáry, M., Kránitz, L. and Baranyai, Zs. (2012). Versenyképesség a Visegrádi országok agrárkereskedelmében. In *Proceedings of 54th Georgikon Scientific Conference*, Keszthely, Pannon University, pp. 531-540.
- [20] Vásáry, M. and Vasa, L. (2015). Agrárkereskedelmi eredmények a tízéves uniós tagság fényében. *Külgügyi Szemle*, vol. 14. iss. 1, pp. 117-140.

## Migration Trends and Migration Policy in Europe

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### **Abstract**

*The issue of migration and migration policy has recently been a topic of concern not only among experts but also in the media. It should be noted here that the issue of migration and migration policy is by no means a new topic, but its importance is compounded by recent migratory events in some European countries. Similarly, in many cases, this issue is used in a negative way by political actors within the states of Europe, but also by political actors as Members of European Parliament. In general, it can be said that these facts degrade the migration itself, or weaken the positive features and benefits useful in the globalization world. In this context, our contribution is focusing on the current trends in migration within selected countries. Contribution is also aimed at the key attributes of migration policy dominating across the European Union. We are looking for answers to questions related to the importance of migration policy in contemporary modern and democratic countries.*

**Keywords:** migration, migration policy, public policy

**JEL Classification:** Q15, J48, J18, J24, J61

### **Introduction**

Migration is currently a phenomenon that due to the latest events has become a subject of interest not only for political representatives but also the media. These are ultimately responsible for the transmission of information related to migration and migration policy of nation states and they contribute to the variety of opinions, interest groups, political subjects as well as individuals on this relatively sensitive issue. Here it's however important to emphasize that migration and migration policy are in no way new subjects, on the contrary, they are subjects that have been present in political research for a few decades. Naturally, with different intensity and results. The current migration trends and the migration policy of nation states in Europe is impossible to judge without having knowledge of some of the developmental trajectories of the history of migration itself. In the context of this paper therefore the basic migration trends in the European sphere that have taken place primarily in the second half of the 20<sup>th</sup> century, will be considered, since precisely these ones significantly determine the direction of migration-political current nation states of Europe. Generally we can therefore state that the rapid economic growth in democratic countries of Western Europe after the Second World War and the subsequent economic problems at the beginning of the 70's are the common denominator of trends in the sphere of migration policy of the majority of countries of the European continent. (Štefančík, 2011)

## **2. Problem Formulation and Methodology**

The attention of political entities, the professional and wide public in matters of migration and migration policy of nation states is also given by the European Union. In this context we will, in the following sentences, deal with migration trends and migration policy in selected European countries. In this context we focus our attention on the state as they are Slovakia, Czech Republic, Hungary, Austria and Switzerland. From a methodological perspective we will base ourselves on the set of the following methods: method of qualitative assessment of collected data, based mainly on the subjective view of the author on the information and assessed based on an interdisciplinary approach to the said issue. The comparative method- in it the subjective views of the author on the said issue are compared with the already existing information. The method of synthesis- we use it mainly as a generic scientific method in connecting different findings that present only a part of the overall problem, into one explanatory whole. In synthesis then mutually important connections are observed which ultimately helps to discover internal patterns of functioning of the development of the phenomenon or the object in question. It's therefore an approach where conclusions are formulated based on previous findings. Here it's important to note that analysis and synthesis are contradictory ways of research, but in real life they are mutually and significantly compatible. Due to this reason they are called analytical-synthetic approaches since synthesis in many cases isn't possible without analysis as well as the other way round.

## **3. Problem Solution**

The Second World War significantly affected international migration. Generally we can say that this was more or less done negatively. Due to the events of the war people were forced to leave their homes and move to safer locations. In many cases there was also forced relocation of the population as directed by the state authorities, also because of the post-war situation in Europe.

In a similar spirit to that of the post-war migration was the migration that we could call, according to Münz's template, as colonial, or postcolonial migration. (Münz, 1997) Because of the end of the Second World War and also because of the weakening of former colonial powers, over 7 000 000 originally European citizens returned to Europe. They were mostly former members of the colonial government, the army and their family members. The worsening life conditions, political and ethnical conflicts forced the citizens of former colonies to also seek shelter in European countries such as Great Britain, France, Benelux countries, Italy, Portugal, Spain and many others. (Currel, 2004)

A significantly different type of migration was labour migration. It became an indispensable part of economic policies of the war-destroyed European countries. Political representatives were forced to deal with the issue of insufficient work capacities through the so-called open migration policy. This was generally based on recruiting cheap labor from economically and socially less developed countries. Members of these countries were willing to work for a relatively low wage which resulted in the native residents gradually losing interest in working in certain fields of national economy. The instruments for achieving this goal were various types of benefits (e.g. providing accommodation etc.). (Santel, 1995) The following table illustrates the estimated migration between the east and west after World War II:



**Table 1: Migration Between East and West 1945-1950**

Country of origin	Destination	Number
Poland (including former regions that belonged to Germany)	GDR, (mainly) FRG	7 000 000
Former Czechoslovakia	GDR, FRG, Austria	3 200 000
Parts of the former Soviet Union (Russia, Belorussia, Ukraine, Baltic countries)	GDR, (mainly) FRG	1 500 000
Hungary	GDR, FRG, Austria	225 000
Former Yugoslavia	GDR, FRG, Austria	360 000
Parts of the former Yugoslavia (nowadays Croatia, Montenegro, Slovenia)	Italy	200 000
Slovakia, Rumania, former Yugoslavia	Hungary	315 000
Hungary	Slovakia	73 000
Part of the former Soviet Union (current Russia)	Finland	400 000
Parts of the former Soviet Union (presently Belorussia, Latvia, Ukraine)	Poland	1 496 000
Former Yugoslavia	Part of the former Soviet Union (current Ukraine)	50 000
Part of the former Soviet union (current Ukraine)	Former Czechoslovakia	42 000
Germany, Austria (displaced persons, prisoners of war)	Poland, former Czechoslovakia	4 700 000
Together:		20 100 000

Source: (Fassmann, Münz, 1996)

A partial turn in the migration policy of Europe occurred in the 70's. This change mainly reacted to the situation in the world economy. The oil crisis showed multiple countries that the dependence on importing energy supplies is very treacherous. In this context oil became a significant political and economic weapon. Because of the recession in world economy, unemployment in European countries began to increase. Countries tried to lessen the consequences of this crisis by restricting the migration flows. It's important to note that despite the precautions the countries didn't manage to stop labor migration, but maybe to identify it's slowing down. Changes in migration policy occurred also in the context of changes in the social and political order in multiple countries of the former Soviet Union and a little while later also with the broadening of the European Union with states such as Austria, Sweden, Finland and Estonia, Lithuania, Latvia, Poland, the Czech republic, Hungary, the Slovak republic, Slovenia, Malta, Cyprus, but also Rumania and Bulgaria. (Horváth, 2016) It's important to remind that the European migration policy itself had in the context of the realities mentioned above, multiple phases:

- 1957 – 1990 coordination of policies of member states
- 1990 – 1999 cooperation with governments of member states
- Od 1999 – communitarisation of significant spheres of migration policy

These phases can be also divided based on the nature of the migration waves as follows:

- 1950 – 1980 – economic migration phase, the so-called Gastarbeitermodell
- 1980 – 1990 – forced migration phase (refugees, for example from the former Yugoslavia)
- From 1990 till today – mixed migration phase. (Hoesch, 2018)

Nowadays we can look at migration and migration policy from different angles. One of them is viewing migration from the perspective of the safety of the domestic state. In this context even the political parties view the issue of migration in European countries differently and with differing intensity. In the case of the Slovak Republic it can be said that migration and migration policy was never the number one in political discussions. The reason is also the fact that after 1989, thus after changes in the social system, compared to other European countries, foreign migration presented a negligible part. (Vašečka, 2009) This situation didn't change significantly even after the entry of the Slovak Republic into the European Union. From that moment on the number of foreigners legally residing in our country grew four times higher. Generally we can therefore state that the Slovak Republic is not becoming a target place for foreigners, but more of a transit country. (Zorkóciová, Ďuranová, 2016) It's however important to turn our attention also to the other side of the coin, to the migration of domestic citizens abroad. This has to do with labor migration. Because of low wages and a relatively high tax system, Slovaks are forced to leave their families and look for work abroad. Despite the fact that this reality is alarming, the attention given to this by political elite and professionals is negligible. In the last period we've witnessed that the labor market, despite the relatively low number of unemployment, needs the income of foreign work force especially in fields that require low-qualified work force. (Gut'an, 2012) We can therefore expect that with the influx of foreign work force, the demand for greater attention to migration and migration policy will be demanded from political representatives and the professional as well as the general public.

In the case of the Czech Republic the situation was similar to that of Slovakia, however with different results. The Czech Republic before 1989 was also a relatively closed country from the viewpoint of migration. We describe it as relative, since migration occurred with friendly countries (Cuba, Vietnam, Poland, Russia etc.) After 1989 the situation changed drastically on both sides. Because of economic reasons, part of the Czech population made use of the possibility to travel for work abroad. It's important to state that in relation to labor migration the highest percentage was found in citizens of the Slovak Republic, but a few years later they were replaced by the citizens of the Ukraine, followed by Vietnam, Russia and Poland. After the entry of the Czech Republic into the European Union, the country became part of the states with the highest rising number of migrants on the European continent. This increasing trend slowed down in 2008 which was ultimately caused by the economic crisis. Looking at the political parties and their election programs, one can state that political representatives take this issue seriously on all of its levels. One could also say that the recent presidential elections were held partially in the spirit of migration and the migration policy of the state. (Ministerstvo vnitra ČR, 2018)

Based on the statistics published in 2010, the population of Hungary is the most reserved among all countries of the European Union with regard to migrants. They even doubt the thesis that migrants are an important part of the economy of the country. This trend can be identified also presently, since Hungary approaches the subject of migration from a significantly pragmatic approach. The opinions of political parties in relation to migrants from the third world countries are especially negative. The current government is also equally critical. One of the representatives recently stated that there's a close link between migration and terror or that immigration is a safety risk for every European country. Here we can see a strict view of political representatives of the state to the issue of migration. Despite the significant critique

of this approach from some international NGOs and part of the representatives of the European Union, we can identify similar opinions in the eyes of the public. These are highly determined also by the constantly prolonged crisis state in the country that in case of need enables the government to include the army in helping the police with the protection of borders or other activities related to incoming migrants. (Cabinet Office of the Prime Minister, 2018)

Expressed in percentages, Switzerland is a country with the long-term highest number of foreigners in Europe. Contrary to other western European countries, Switzerland was confronted with immigration before the Second World War. During the war, thanks to the favorable political conditions, it provided shelter to many refugees of a Jewish origin as well as the capital that not only they, but also the former political elites of European states sent here. Despite the historically determined migrant traditions, similarly to the case of other western European countries, Switzerland as well dealt with a lack of workforce in certain fields of national economy by inviting foreigners. Even though the economic migrant in the context of the rotation principle was to remain in Switzerland only for a certain period of time after which he was to return to his domestic country, Switzerland didn't manage to stop the gradual rise of immigrants. The subject of migration and integration of foreigners is a regular component of the programmer theses of political parties, especially with regards to elections to the legislative bodies. (Machyniak, Štěpák, Švikruha, 2011) It's important to note that the anti-immigration policy is considered to be one of the key factors of the election fight between political parties. It's no different to the society itself, since a few years ago the building of mosques was prohibited and later it also turned against the suggestion to create primary schools for the Muslim community. Based on the latest published statistics in the field of migration, over 15 000 Italians, 14 500 Germans, 12 800 Portuguese, 6000 French, 5 200 Kosovans, 4 000 Spanish, 3 300 Serbians, 3 300 Turks live in the Swiss confederation. Most of the migrants come from the European continent and the number of members of third world countries has an annual slightly decreasing tendency. (Staatssekretariat für Migration, 2018)

Migration and migration policy have for quite a few years been an important topic of election and political parties. It's important to note that the radicalization of some originally moderate opinions has been occurring. The tendency of strongly nationalist-oriented political subjects making use of a majorly populist rhetoric, similarly as in Europe, is also present in Austria. The majority of the political parties are aware of the fact that Austria is a migrant country and that it will ultimately not function without laboring migrants. In this context the rationally-thinking political parties are more concerned with choosing the suitable and acceptable migrants. That means, those that are ready to learn the language of the host country and last but not least, to respect the domestic and European legal tradition. According to the statistics published so far there's about 186 000 Germans, 120 000 Serbians, 117 000 Turks, 102 000 Rumanians, 95 000 citizens of Bosnia and Hercegovina, 77 000 Hungarians, 76 000 Croatians, 62 000 Polish, 48 000 Syrians, 46 000 Afghani living in Austria. From this we can see that the population consists of a great variety of people, and the majority of them come to Austria because of new work opportunities. (Statistic Austria, 2018)

#### **4. Conclusion**

The issue of migration and migration policy itself has recently been a topic of concern among political representatives as well as the media that want to initiate a social discussion concerning this topic, or the change of the political orientation for nation states. Migration is constantly talked about as being a safety threat not only for nation states but for Europe as such. It should be noted here that the borders of Europe in the case of migration present a relative term. In the case of recent migration it has to do with the (non)acceptation of cultures that are traditionally

distant from the European culture. Migration undoubtedly brings about also the phenomenon of multiculturalism, the policy of which so far hasn't brought the desired fruits. Despite this, the situation on the European labor market will require in the future a coordinated migration policy based on rational needs of European states. From this perspective migration has a crucial impact on the structure of society. In case of an original country it presents an outflow, in many cases of important labor force, and for the receiving country there's an influx of new workers. (Antalová, 2016) In this context, from an economic point of view, it would be a clear advantage. However despite this, some authors claim that this doesn't have to be necessarily true or that when making statements of this type we should be particularly cautious. They claim that it's inappropriate and especially not responsible to waste our own human resources. We should be more willing instead to requalify people. (Colemann, 1992) Naturally this is only possible if the economy in the country has a long-term economic growth. As a conclusion we could state that nowadays European countries are standing on the crossroads and the next steps done in the sphere of migration policy will show the nature of Europe in the years to follow.

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### **References**

- [1] Antalová, M. (2016). Migranti a ich asimilácia na Slovensku. In *Politické, ekonomické a sociálne súvislosti súčasnej migračnej krízyv Európe*. Bratislava: Ekonomická univerzita v Bratislave, pp. 7-18.
- [2] Cabinet Office of the Prime Minister (2018). *We must prevent Hungary from being turned into a immigrant country*. [online]. [cit. 2018-05-03]. Available at: <http://www.kormany.hu/en/government-spokesperson/news/we-must-prevent-hungary-from-being-turned-into-an-immigrant-country>.
- [3] Colemann, D.A. (1992). Does Europe need Immigrants? Population and Work Force Projections. *International Migration Review*, vol. 26, iss. 2, pp. 413-461.
- [4] Currell, E. (2004). *Migration in Europa – Daten und Hintergründe*. Stuttgart: Lucius & Lucius.
- [5] Frasmann, H., Münz, R. (1996). Europäische Migration – ein historischer Überblick. In *Migration in Europa. Historische Entwicklung, aktuelle Trends, politische Reaktionen*. Frankfurt am Main, New York, pp. 13-52.
- [6] Guľan, D. (2017). Regional Marketing as a Functional Instrument of Region's Development. In *The Quality of Democracy in the New Political Era: Proceedings of the 4th Academos Conference 2017*. Bolonga: Filodiritto, pp. 119-123.
- [7] Hoesch, K. (2018). *Migration und Integration. Eine Einführung*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- [8] Horváth, P. (2016). Migration Policy the Link between the Visegrad Group Countries and the European Union. In *International Conference on European Integration 2016*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 368-375.

- [9] Machyniak, J., Štěpák, R., Švikruha, M. (2011). Migrácia a migračná politika vo Švajčiarsku. In *Migračná politika národných štátov*. Trnava: Slovenská spoločnosť pre regionálnu politiku, pp. 84-101.
- [10] Ministerstvo vnitra ČR. (2018). *Zprávy o situaci v oblasti migrace a integrace cizinců v České republice za roky 2001-2016*. [online]. [cit. 2018-05-03]. Available at: <http://www.mvcr.cz/migrace/docDetail.aspx?docid=21620122&doctype=ART>.
- [11] Münz, R. (1997). Phasen und Formen der europäischen Migration. In *Migration in Flucht, Aufgaben und Strategien für Deutschland, Europa und die internationale Gesellschaft*. München: Bundeszentrale für politische Bildung, pp. 35-47.
- [12] Santel, B. (1995). *Migration in und nach Europa. Erfahrungen, Strukturen, Politik*. Opladen: Leske + Budrich.
- [13] Staatssekretariat für Migration. (2018). *Statistik Zuwanderung* [online]. [cit. 2018-05-03]. Available at: <https://www.sem.admin.ch/sem/de/home/publiservice/statistik/auslaenderstatistik/monitor.html>.
- [14] Statistic Austria. (2018). *Bevölkerung in Privathaushalten nach Migrationshintergrund* [online]. [cit. 2018-05-03]. Available at: [http://www.statistik.at/web\\_de/statistiken/menschen\\_und\\_gesellschaft/bevoelkerung/bevoelkerungsstruktur/bevoelkerung\\_nach\\_migrationshintergrund/index.html](http://www.statistik.at/web_de/statistiken/menschen_und_gesellschaft/bevoelkerung/bevoelkerungsstruktur/bevoelkerung_nach_migrationshintergrund/index.html).
- [15] Štefančík, R. (2011). Migrácia v Európe v II. polovici 20. storočia. In *Migračná politika národných štátov*. Trnava: Slovenská spoločnosť pre regionálnu politiku, pp. 9-33.
- [16] Vašečka, M. (2009). *Postoje verejnosti k cudzincom a zahraničnej migrácii v Slovenskej republike*. Bratislava: Medzinárodná organizácia pre migráciu.
- [17] Zorkóciová, O., Ďuranová, L. (2016). Current Issues of Legal and Illegal Migration in Slovakia. In *International Conference on European Integration 2016*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 1120-1129.

## Competitiveness and Economic Convergence Across the European Union: Successes and Failures

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### **Abstract**

*High competitiveness of the economies of the Member States, economic, social and territorial cohesion and sustained convergence of the economic performances of the Member States are among the EU's basic economic objectives. Many Member States achieve these objectives, but some Member States have failed to do so for a long time. Despite the successes and benefits of the EU internal market and common policies, the existence of the monetary union and the coordination of Member States' economic policies, despite the positive economic effects of European integration, economic and social differences between some EU Member States and the rest of the EU persist or even grow for a long time. Also, the levels of competitiveness remain very different between EU Member States. The gap between the most and the least competitive EU countries persists or even increases for a long time. Economic convergence is therefore not a general phenomenon across the EU. This has its consequences in terms of weakening EU cohesion and emergence of disintegration tendencies in some EU countries.*

**Keywords:** cohesion, competitiveness, convergence, European Union, integration

**JEL Classification:** F15, F32, F36, F42, O47

### **1. High Competitiveness and Sustained Convergence as the EU's Goals**

The Treaty on European Union and the Treaty on the Functioning of the European Union as well as EU legal acts are basically formulated to support the process of deepening European integration. At the same time, the EU Treaties and EU legal acts set out and support such economic objectives and measures that should lead to high competitiveness of the economies of the Member States, economic, social and territorial cohesion and sustained convergence of the economic performances of the Member States.

Article 1 of the Treaty on European Union states that this Treaty marks a new stage in the process of creating an ever closer union among the peoples of Europe. Article 3 of the Treaty on European Union sets out the economic objectives of the EU, particularly balanced economic growth, price stability, full employment, high competitiveness of economies and economic, social and territorial cohesion, and declares the euro as the single currency of the EU.

The basic objectives of the European Union are dealt with in more detail in the Treaty on the Functioning of the European Union. According to Article 119 of the Treaty on the Functioning of the European Union, the economic policy in the EU is based on the close coordination of Member States' economic policies and on the definition of common objectives. Article 121 of the Treaty on the Functioning of the European Union calls for the coherence of Member States' economic policies with the broad economic policy guidelines of the EU and for the sustained convergence of the economic performances of the EU Member States.

The essential components of the EU's economic architecture are the internal market ensuring the free movement of goods, services, persons and capital between all Member States and the monetary union – the euro area – operating nowadays with 19 member countries, inter alia to complement the internal market and further improve its functioning. The internal market is complemented by common policies designed to ensure the same or similar conditions for all Member States and all entities within the internal market as well as to reduce economic and social differences between the Member States. The monetary union is complemented by the mechanisms for coordination of Member States' economic policies.

Despite the deepening of integration of the EU Member States, despite the pursuit of objectives such as high competitiveness and sustained economic convergence, despite the successes and benefits of the EU internal market and common policies, despite the positive economic effects of European integration, economic and social differences between some EU Member States and the rest of the EU persist or even grow for a long time. Also, the levels of competitiveness remain very different between EU Member States. For example, Kouba, Mádr, Nerudová and Rozmahel (2016, pp. 65–66) argue that “Europe is still too heterogeneous and it will remain so in future, simply because of the fact that people in Ireland, Hungary, Portugal or Sweden are different, have a distinct mentality, culture, traditions, social relations and ways of thinking”. This creates a clear contradiction between the vision of the ever closer Union and the persisting economic and social differences between many EU Member States.

## **2. Relevant Indicators, Data and Methodology**

In the following analysis, we will show the long-term existence of a group of EU Member States with high economic levels and high competitiveness and, on the contrary, a group of EU Member States whose economic and competitive levels are lagging behind the best EU countries and remain unchanged or even worsen for a long time. We will use an international comparison of the development of three indicators in the long term. This comparison will be made for all 28 EU Member States and some non-EU countries.

First, we will compare competitiveness of economies. We will use the Global Competitiveness Index, designed and published by the World Economic Forum (WEF) in its publication *The Global Competitiveness Report*. It is one of the most well-known and most respected countries' competitiveness rankings. This competitiveness assessment evaluates about 140 countries on the basis of 114 criteria. We will compare the ranking of the EU Member States and other selected countries according to the Global Competitiveness Index in 2005–2018.

Competitiveness of the EU Member States and other selected countries will be further evaluated on the basis of the current account balance, expressed as % of GDP, in 2007–2016. Simply put, with the growing competitiveness of the country, its current account balance is improving. The most competitive countries usually have high current account surpluses, the least competitive countries have high current account deficits. However, this does not apply under all conditions. For example, in countries experiencing a severe economic recession, demand reductions may cause a significant drop in imports and, therefore, an improvement of the current account balance, but which does not automatically indicate an improvement of competitiveness of the country.

The convergence of the economic performances of the EU Member States and other selected countries will be monitored through the development of the gross domestic product per capita in PPS in 2007–2016. The values of this indicator are expressed as % of the EU average, the EU average is set to equal 100%.

### 3. Competitiveness and Convergence in the EU – Results and Impacts

First, we will answer the question of whether the European Union and its Member States have highly competitive economies. The ranking of the EU Member States and other selected countries in the Global Competitiveness Index in 2005–2018 is shown in Table 1. It is clear that high competitiveness of the EU economy as a whole cannot be said. There are significant differences in the levels of competitiveness of the economies of individual EU Member States.

**Table 1: Global Competitiveness Index Rankings (2005–2018)**

	2005– –2006	2007– –2008	2009– –2010	2011– –2012	2013– –2014	2015– –2016	2017– –2018
<b>Switzerland</b>	4	2	1	1	1	1	1
<b>United States</b>	1	1	2	5	5	3	2
<b>Singapore</b>	5	7	3	2	2	2	3
<b>Netherlands</b>	11	10	10	7	8	5	4
<b>Germany</b>	6	5	7	6	4	4	5
<b>Hong Kong (China)</b>	14	12	11	11	7	7	6
<b>Sweden</b>	7	4	4	3	6	9	7
<b>United Kingdom</b>	9	9	13	10	10	10	8
<b>Japan</b>	10	8	8	9	9	6	9
<b>Finland</b>	2	6	6	4	3	8	10
<b>Norway</b>	17	16	14	16	11	11	11
<b>Denmark</b>	3	3	5	8	15	12	12
<b>Austria</b>	15	15	17	19	16	23	18
<b>Luxembourg</b>	24	25	21	23	22	20	19
<b>Belgium</b>	20	20	18	15	17	19	20
<b>France</b>	12	18	16	18	23	22	22
<b>Ireland</b>	21	22	25	29	28	24	24
<b>Estonia</b>	26	27	35	33	32	30	29
<b>Czech Republic</b>	29	33	31	38	46	31	31
<b>Spain</b>	28	29	33	36	35	33	34
<b>Malta</b>	44	56	52	51	41	48	37
<b>Poland</b>	43	51	46	41	42	41	39
<b>Lithuania</b>	34	38	53	44	48	36	41
<b>Portugal</b>	31	40	43	45	51	38	42
<b>Italy</b>	38	46	48	43	49	43	43
<b>Slovenia</b>	30	39	37	57	62	59	48
<b>Bulgaria</b>	61	79	76	74	57	54	49
<b>Latvia</b>	39	45	68	64	52	44	54
<b>Slovakia</b>	36	41	47	69	78	67	59
<b>Hungary</b>	35	47	58	48	63	63	60
<b>Cyprus</b>	41	55	34	47	58	65	64
<b>Romania</b>	67	74	64	77	76	53	68
<b>Croatia</b>	64	57	72	76	75	77	74
<b>Greece</b>	47	65	71	90	91	81	87

Source: WEF (2005, 2007, 2009, 2011, 2013, 2015, 2017)



**Table 2: Current Account Balance (% of GDP, 2007–2016)**

	2007	2009	2011	2013	2014	2015	2016
<b>Netherlands</b>	7.0	5.5	8.7	9.9	8.6	8.7	8.5
<b>Germany</b>	6.7	5.7	6.1	6.7	7.4	8.5	8.2
<b>Denmark</b>	1.4	3.5	6.6	7.8	8.9	8.8	7.3
<b>Malta</b>	-1.9	-6.6	-0.2	2.7	8.8	4.6	6.6
<b>Hungary</b>	-7.1	-0.8	0.8	3.8	1.5	3.4	6.1
<b>Bulgaria</b>	-23.9	-8.3	0.3	1.3	0.1	0.0	5.3
<b>Slovenia</b>	-4.1	-0.6	0.2	4.4	5.8	4.4	5.2
<b>Luxembourg</b>	9.7	7.2	6.0	5.5	5.2	5.1	4.8
<b>Sweden</b>	8.2	6.0	5.5	5.3	4.6	4.7	4.4
<b>Ireland</b>	-6.5	-5.6	-2.4	2.1	1.6	10.9	3.9
<b>Italy</b>	-1.4	-1.9	-3.0	1.0	1.9	1.5	2.7
<b>Croatia</b>	-7.3	-5.3	-0.8	1.0	2.0	4.4	2.4
<b>Austria</b>	3.8	2.6	1.6	1.9	2.5	1.9	2.1
<b>Estonia</b>	-15.0	2.5	1.3	0.5	0.3	2.0	1.9
<b>Spain</b>	-9.6	-4.3	-3.2	1.5	1.1	1.1	1.9
<b>Latvia</b>	-20.7	7.8	-3.2	-2.7	-1.7	-0.5	1.4
<b>Czech Republic</b>	-4.6	-2.3	-2.1	-0.5	0.2	0.2	1.1
<b>Portugal</b>	-9.7	-10.4	-6.0	1.6	0.1	0.1	0.7
<b>Belgium</b>	2.0	-1.1	-1.1	-0.3	-0.9	-0.1	0.1
<b>Poland</b>	-6.3	-4.0	-5.2	-1.3	-2.1	-0.6	-0.3
<b>France</b>	-0.3	-0.8	-1.0	-0.9	-1.1	-0.2	-0.9
<b>Greece</b>	-15.2	-12.3	-10.0	-2.0	-1.6	-0.2	-1.1
<b>Lithuania</b>	-15.5	1.4	-4.6	0.8	3.2	-2.8	-1.1
<b>Finland</b>	3.8	1.9	-1.8	-1.6	-1.3	-1.0	-1.4
<b>Slovakia</b>	-5.9	-3.4	-5.0	1.9	1.1	-1.7	-1.5
<b>Romania</b>	-13.5	-4.7	-4.9	-1.1	-0.7	-1.2	-2.1
<b>Cyprus</b>	-11.8	-7.7	-4.1	-4.9	-4.3	-1.5	-4.9
<b>United Kingdom</b>	-3.8	-3.9	-2.4	-5.5	-5.3	-5.2	-5.8
<b>EA-19</b>	0.0	-0.1	-0.0	2.2	2.5	3.2	3.5
<b>EU-28</b>	-0.5	-0.1	0.4	1.7	1.7	2.2	2.2
<b>Switzerland</b>	10.2	7.4	8.0	11.5	8.7	11.4	10.5
<b>Norway</b>	12.2	10.6	12.4	10.2	11.0	8.7	5.0
<b>Japan</b>	4.7	2.8	2.1	0.9	0.8	3.1	3.8
<b>United States</b>	-4.9	-2.6	-2.9	-2.1	-2.1	-2.4	-2.4

Source: Eurostat (2018); IMF (2017)

Five old EU Member States (the Netherlands, Germany, Sweden, the United Kingdom and Finland) have been among the ten most competitive countries in the world for a long time. Six old EU Member States (Denmark, Austria, Luxembourg, Belgium, France and Ireland) are among the countries with a high level of competitiveness that have been ranked 12<sup>th</sup>–25<sup>th</sup>. Below them, Estonia and Czech Republic have been ranked approximately 30<sup>th</sup>.

The least competitive EU Member States are Latvia, Slovakia, Hungary, Cyprus, Romania, Croatia and Greece. These worst-ranked EU countries do not show a general tendency to improve their rankings. Their rankings mostly remain unchanged or even worsen for a long time. For example, when comparing competitiveness in 2005–2006 and 2017–2018, the

rankings of Slovakia worsened from 36<sup>th</sup> to 59<sup>th</sup>, of Hungary from 35<sup>th</sup> to 60<sup>th</sup>, of Cyprus from 41<sup>st</sup> to 64<sup>th</sup> and of Greece from 47<sup>th</sup> to 87<sup>th</sup>.

Table 2 shows the development of the current account balance in 2007–2016. In 2016, the Netherlands and Germany had the highest current account surpluses among the EU countries, namely 8.5% of GDP and 8.2% of GDP, respectively. At the same time, the Netherlands and Germany are the two most competitive EU countries according to the Global Competitiveness Index, as we have mentioned above. High current account surpluses were also in Denmark, Malta, Hungary, Bulgaria, Slovenia, Luxembourg, Sweden and Ireland in 2016. Sweden, Denmark and Luxembourg are also highly competitive countries according to the Global Competitiveness Index. On the other hand, Poland, France, Greece, Lithuania, Finland, Slovakia, Romania, Cyprus and the United Kingdom had the current account deficits in 2016. At the same time, Slovakia, Cyprus, Romania and Greece are among the least competitive EU countries according to the Global Competitiveness Index.

The Czech Republic had the current account surplus of 1.1% of GDP in 2016. Switzerland is the country outside the EU and the most competitive country in the world according to the Global Competitiveness Index. It has also better current account balance than any EU Member State – namely the surplus of 10.5% of GDP in 2016.

The differences in the levels of the current account balance between the EU countries decreased during the period 2007–2016, mainly due to the reduction or elimination of the initially very large current account deficits in a number of the EU Member States. On the contrary, some EU countries (Belgium, Finland or the United Kingdom) faced deterioration of their current account balances. Despite these developments, the differences between the EU countries remain significant.

The development of the gross domestic product per capita in PPS in 2007–2016 is shown in Table 3. It is clear that the differences in the levels of GDP per capita in PPS between the EU Member States are significant. In 2016, Luxembourg had the highest economic level in the European Union, with GDP per capita at 258% of the EU average. On the contrary, Bulgaria had the lowest GDP per capita among the EU countries, namely 49% of the EU average, i.e. more than five times lower than Luxembourg.

The other countries of the European Union were between these two extreme values. Ten of them (Ireland, the Netherlands, Austria, Denmark, Sweden, Germany, Belgium, Finland, the United Kingdom and France) had GDP per capita higher than the EU average in 2016, while the remaining EU countries had GDP per capita below the EU average. In 2016, the Czech Republic was ranked 15<sup>th</sup> out of 28 EU Member States, with GDP per capita at 88% of the EU average.

Importantly, in 2007–2016 there was no general convergence of the economic levels of the EU Member States. In the monitored period, GDP per capita in some Member States approached the EU average, but in other Member States it dropped deeper below the EU average. A significant improvement of GDP per capita and its approach to the EU average was achieved in the most of the new EU Member States (Malta, Czech Republic, Slovakia, Estonia, Lithuania, Latvia, Poland, Hungary, Romania and Bulgaria) in 2007–2016. GDP per capita in the Czech Republic increased from 82% to 88% of the EU average in 2007–2016. GDP per capita of several old EU Member States has also increased significantly.

The largest worsening of GDP per capita was noticed in some euro area countries affected by the debt crisis or by a longer economic recession or stagnation. In 2007–2016, in relation to the EU average, GDP per capita in Spain fell from 103% to 92%, in Portugal from 81% to 77%, in Cyprus from 104% to 83%, in Greece from 93% to 68%, in Finland from 119% to

109%, in France from 108% to 104%, in Italy from 107% to 97%, and in Slovenia from 87% to 83%.

**Table 3: GDP per Capita in PPS (index, EU-28 = 100, 2007–2016)**

	2007	2009	2011	2013	2014	2015	2016
<b>Luxembourg</b>	265	255	265	261	270	267	258
<b>Ireland</b>	148	129	130	132	137	181	183
<b>Netherlands</b>	138	137	133	134	130	129	128
<b>Austria</b>	125	127	128	131	130	130	128
<b>Denmark</b>	123	125	128	128	128	127	124
<b>Sweden</b>	128	123	126	125	124	125	123
<b>Germany</b>	117	117	123	124	126	124	123
<b>Belgium</b>	117	118	120	120	119	119	118
<b>Finland</b>	119	117	117	113	111	109	109
<b>United Kingdom</b>	112	107	106	108	109	108	107
<b>France</b>	108	108	108	108	107	105	104
<b>Italy</b>	107	106	104	98	96	95	97
<b>Malta</b>	79	81	83	86	90	93	96
<b>Spain</b>	103	100	93	89	90	91	92
<b>Czech Republic</b>	82	85	83	84	86	87	88
<b>Cyprus</b>	104	105	96	84	81	82	83
<b>Slovenia</b>	87	85	83	82	82	82	83
<b>Portugal</b>	81	82	77	77	77	77	77
<b>Slovakia</b>	67	71	75	77	77	77	77
<b>Estonia</b>	69	64	71	75	76	75	75
<b>Lithuania</b>	60	56	66	73	75	75	75
<b>Greece</b>	93	94	75	72	72	69	68
<b>Poland</b>	53	60	65	67	67	68	68
<b>Hungary</b>	60	64	66	67	68	68	67
<b>Latvia</b>	57	52	57	62	64	64	65
<b>Croatia</b>	61	62	60	60	59	59	60
<b>Romania</b>	43	50	52	54	55	56	58
<b>Bulgaria</b>	40	44	45	46	47	47	49
<b>EA-19</b>	109	109	108	107	107	106	106
<b>EU-28</b>	100	100	100	100	100	100	100
<b>Switzerland</b>	157	160	162	165	165	166	161
<b>Norway</b>	177	172	179	184	176	161	148
<b>United States</b>	152	146	143	145	146	146	145
<b>Japan</b>	109	103	103	107	105	106	107

Source: Eurostat (2017)

These divergence tendencies among the old EU Member States (EU-15) are also confirmed by previous analyses. According to Kulhánek (2014, p. 404), “Spain demonstrated a successful development of GDP per capita up to 2007 and it reached a level of 93.5% of the EU-15. In the case of Greece the only successful development was recorded in the period 2000–2004 and Portugal came very slightly closer to a level of the EU-15 during the reporting period 1995–2010. Since 2009, the level of GDP per capita in the latter three countries in relation to the

EU-15 average has been decreasing and these economies are diverging.” Also according to Kulhánek (2012, p. 170), “from the analysis of convergence of the EU-15 countries we can draw conclusions about some divergence tendencies”.

For comparison, let’s also mention the economic levels of some countries outside the European Union. In 2016, Switzerland had GDP per capita at 161% of the EU average, Norway at 148% of the EU average, the United States at 145% of the EU average and Japan at 107% of the EU average.

#### **4. Conclusion**

High competitiveness of the economies of the Member States, economic, social and territorial cohesion and sustained convergence of the economic performances of the Member States are among the EU’s basic economic objectives. Many Member States achieve these objectives, but some Member States have failed to do so for a long time. Despite the successes and benefits of the EU internal market and common policies, the existence of the monetary union and the coordination of Member States’ economic policies, despite the positive economic effects of European integration, economic and social differences between some EU Member States and the rest of the EU persist or even grow for a long time.

The most of the new EU Member States evince gradual improvement and convergence of their economic indicators to the EU average or to the most developed EU Member States. This concerns, for example, the development of GDP per capita in PPS or of the current account balance. This positive convergence trend is also noticed in the Czech Republic.

Of course, the pace of convergence varies from country to country. In all new Member States, the current account balance has improved significantly in the last ten years. Ten new Member States have noticed convergence of their GDP per capita in PPS to the EU average in the last ten years, but three new Member States (Cyprus, Slovenia and Croatia) have faced divergence.

The most of the old EU Member States maintain the positive development of monitored economic indicators, but some of them face unfavourable developments. France, Greece and the United Kingdom have failed to break out of long-term current account deficits, the Finnish current account has flipped from the surplus to the deficit in the last ten years. During the last decade, in relation to the EU average, GDP per capita in PPS declined significantly in six old Member States, namely in Greece, Spain, Portugal, Italy, Finland and France.

A differentiated picture of the EU Member States is also provided by the Global Competitiveness Index, designed and published by the World Economic Forum. This does not indicate high competitiveness of the economy of the European Union as a whole. The levels of competitiveness remain very different between EU Member States. Only a few EU Member States have highly competitive economies, while other EU countries have lower competitiveness. The gap between the most and the least competitive EU countries persists or even increases for a long time.

While the economic effects of European integration are largely appreciated, it must be borne in mind that the persisting differences in competitiveness and economic levels between EU countries, the slow pace of convergence and, in some cases, ongoing divergence weaken EU cohesion and contribute to critical attitudes towards European integration and to emergence of disintegration tendencies in some EU countries.

Economic convergence is not a general phenomenon across the EU. As Bąba (2016, p. 43) concludes in his analysis, “a worrying thing, which can be noticed as the final outcome of this

analysis, is the formation of so-called “two-speed Europe”, when it comes to levels of socio-economic development, consisting of a) poorer East and South and b) richer North and West”. The contradiction between the vision of the ever closer Union and the long-lasting economic and social differences between many EU Member States may be one of the main factors and risks of the future development of the European Union.

## References

- [1] Bába, W. (2016). Changes in Level of Socio-Economic Development of EU Member Countries in the 2004–2013 Period – Taxonomic Analysis. In Kovářová, E., Melecký, L. and Staničková, M. (eds.). *Proceedings of the 3<sup>rd</sup> International Conference on European Integration 2016*. Ostrava: VŠB – Technical University of Ostrava, pp. 37–45. ISBN 978-80-248-3911-0.
- [2] Eurostat (2018). *Current account balance* [online]. [cit.2018-01-15]. Available at: <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=ti-psbp20&plugin=1>.
- [3] Eurostat (2017). *GDP per capita in PPS* [online]. [cit.2017-12-15]. Available at: <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tec00114&plugin=1>.
- [4] IMF (2017). *World Economic Outlook Database Oct 2017* [online]. [cit.2017-12-15]. Available at: <http://www.imf.org/external/pubs/ft/weo/2017/02/weodata/index.aspx>.
- [5] Kouba, L., Mádr, M., Nerudová, D. and Rozmahel, P. (2016). Policy Autonomy, Coordination or Harmonization in the Persistently Heterogeneous European Union? *DANUBE: Law and Economics Review*, vol. 7, iss. 1, pp. 53–71.
- [6] Kulhánek, L. (2014). Debt Crisis and Convergence in the European Union. In Honová, I. et al. (ed.). *Proceedings of the 2<sup>nd</sup> International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, pp. 401–409. ISBN 978-80-248-3388-0.
- [7] Kulhánek, L. (2012). Real Convergence in Central European EU Member States. In Honová, I., Melecký, L. and Staničková, M. (eds.). *Proceedings of the 1<sup>st</sup> International Conference on European Integration 2012*. Ostrava: VŠB – Technical University of Ostrava, pp. 161–170. ISBN 978-80-248-2685-1.
- [8] WEF (2005). *The Global Competitiveness Report 2005–2006*. Geneva: WEF.
- [9] WEF (2007). *The Global Competitiveness Report 2007–2008*. Geneva: WEF.
- [10] WEF (2009). *The Global Competitiveness Report 2009–2010*. Geneva: WEF.
- [11] WEF (2011). *The Global Competitiveness Report 2011–2012*. Geneva: WEF.
- [12] WEF (2013). *The Global Competitiveness Report 2013–2014*. Geneva: WEF.
- [13] WEF (2015). *The Global Competitiveness Report 2015–2016*. Geneva: WEF.
- [14] WEF (2017). *The Global Competitiveness Report 2017–2018*. Geneva: WEF.

## What is the Current State of the EU, or we Can Expect a New Federation of the United States of Europe?

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### **Abstract**

*We are in a crisis of economic, financial, migration and political, that is obvious. People lose confidence in European integration because they have failed to honor promises of peace, security and prosperity. We are confronted with problems growing debt of Spain and Greece, as well as the problems of Italian banks and political risks, including Brexit. What can we expect from the EU and the Eurozone in the future? Proposal of multi-speed Europe or deeper integration of the EU? In all areas of economic and political, such as the Federation of the Union, or the new Organization of the States of Europe? Will a new framework of constitutional rules and a new draft constitutional treaty be needed? These are questions that I would like to answer in this paper.*

**Keywords:** EU, Eurozone, the new federation of United States of Europe

**JEL Classification:** F00, F10, F15

### **1. Introduction**

The EU and the Eurozone are doing well. The states have recovered from the financial crisis, which struck ten years ago, and the country's economy EU shows continued growth. But, the new economic crisis is practically in front of the door, we just do not realize it and we do not see the signs that lead to it. Some examples of the expected economic crisis in EU in 2018/19 in a possible connection with the economic situation in the US for example:

- Strong overvaluation of the US stock exchange. The US stock market is extremely overvalued, and with it, other stock exchanges are also going to get along with it. According to investors, the values should be reduced by approximately 50 % and strong self-confidence of financiers. But there is little indication that the economy is rushing into the crisis, and the brokers begin to get rid of the commodities. But such a massive sale will result in a drop in exchange rates that have an impact on the stock market.
- The problem of investors. Their activity is declining and falls into passivity when investors buy only shares that are growing. This, however, leads to a worsening of the overvaluation of the stock exchange.
- Indications of the approaching crisis in the finances themselves. But there may be a phase when money is not available and payments start to defer.
- Interest rates. The FED and the ECB also announced their increase, which cannot be done without significant changes in stock market values. However, confidence in monetary policy in the Eurozone will fall.

- The problem of extreme indebtedness of individual countries. Current debt reaches 325 % of the world's GDP and, according to the IMF, despite the record low interest rates in the US and the EU, every tenth company is able to repay its debts.
- The issue of a political event. Migration crisis continues in Europe and Brexit is approaching.
- A steadily rising economy that will soon stop. Employee salaries are under pressure, owners do not have the means to pay for employees, and this does not seem to improve.

Apple, Alphabet, Amazon, Facebook and Microsoft. It is also the largest tug of the American stock exchange. Although it has contributed roughly 50 % to the current economic growth. We are talking only about five companies, which make up 0.2 % of all listed companies (D. Satler, 2018). And while these five companies are concentrating profits, the rest is in danger of falling. Many investors now buy and sell for debt. Securities lending thus reached a record high. Companies themselves rely on low-interest loans and, on the other hand, their investors also trade in debt.

## **2. What Can we Expect from the EU and Eurozone in Future?**

The current world as well the EU, are so complex that is very difficult to achieve reliable prediction results, even if thorough analysis is conducted. The strategy of 'buy and hold', negative interest rates, Forex price regulation and the functioning of central banks, these are all very complicated topics. Is the goal of economists nowadays to arrive at one comprehensive approach to economics? In my opinion, this is not possible. Economics is immensely broad and with current specialization of economic theorists, it is not realistic. There is no doubt that we live in times of global financial and economic change, the European currency cannot be maintained in the long run (P. Fontaine: 2014), and we have a problem with Brexit and the EU budget. Stability, growth and well-being in the whole Europe is a slogan of the EU policy. A well-functioning economic and currency union and a strong and stable euro are the basic stones of the EU economy that provide grounds for growth (EC: 2013, p.26). I'm afraid we're getting away from those policies.

In the last few years, Central and Eastern Europe have been facing increasingly more severe economic difficulties. Those, in the end, threaten the political progress achieved by ex-communist countries in the past decades and also lead to the doubts regarding the benefits of the EU membership. Over the last decade, economic growth potential in the region has dropped to half. A strong outflow of qualified labour is becoming an increasingly more severe hindrance to economic growth. Due to growing problems, governments of some countries question the benefits of European integration, characterised by drastic cuts in social spending (IMF, [online] 2017).

The whole Europe has been through a decade of crises and economic weaknesses, which slowed down or even stopped the process of economic convergence between the Western and Eastern parts of the continent. In a number of countries this raises the question whether painful economic and political reforms have been meaningful. In the foreseeable future, existing problems are going to become more severe, as during the time of the fall of communist regimes, the region benefited from an exceptionally favourable economic situation in the world; but this is hardly going to repeat. The main problem of the region is the outflow of qualified workers to Western Europe. IMF estimates that over the last decade, approximately 20 million people have left the countries of Central and Eastern Europe; this is about 5 – 6 % of their population. A half of Hungarian and a quarter of Polish firms complain about the

shortage of experienced workers, which undermines their production and slows down investment. Slovenian as well as Czech firms also complain about the lack of people to hire. Those who leave to work abroad are for example drivers, doctors, nurses and others.

In my opinion, the basis of the EU future is ‘White paper on the future of Europe’, which was introduced by Jean-Claude Juncker (EC) on 1<sup>st</sup> March 2017. The document containing five scenarios of future development is meant to start a debate between politicians and citizens about the further functioning of European institutions (EU Office, 2017, n.163, [online] 2017). The scenarios just as I see it may be next:

- **To continue the current trend.** This would mean the deepening of single and digital market and the cooperation in the area of security. Border checks and other policy areas would still remain within the hands of national governments. In essence, this would mean speeding up the so-called Bratislava process, which the EU leaders already agreed on in September 2016.
- **Reducing the EU to a mere single market.** Security, defence, or the solution of migration crisis would be fully within the competence of national governments. However, the Commission does not support this approach, as it could lead to obstacles in common decision making. According the Juncker, the Union would react to challenges even less efficiently and would not be able to fulfil the expectations of a number of countries and their citizens. The EU might even lose influence on the world affairs.
- **The concept of multispeed Europe**, in which the member states would be able to choose the areas of policies that would be integrated more quickly. However, I would point out that the resulting system might be overly complicated.
- The 27 might decide for a **smaller number of areas in which common approach will be applied.** The main principle of the fourth option is to promise less and do less, but more efficiently. The EU would concentrate on those areas, in which its citizens have the biggest requirements. We are thus talking about security, the fight against terrorism and the support of innovations and trade.
- The last vision relies on the proposal of Euro MP Guy Verhofstadt (ALDE) for **deeper EU integration in all policy areas.** By the federalization of the Union, or the United States of Europe (USE), European institutions would be able to react more efficiently and faster to challenges such as migration, security and economic crises. Among others, the scenario includes the establishment of the defence union and the creation of the posts of the mister of foreign affairs and the minister of finance. The main problem is the transfer of sovereignty from national governments, which is difficult to accept for both, country-level politicians as well as a number of the EU citizens.

For the EU to move forward, the French president Macron (December 2017) proposed future acceptance of European budget, minister of finance for Eurozone, Eurozone parliament, and the creation of the USE. Macron wants the creation of common Eurozone budget, the existence of the common minister of finance (Jan Macháčka, 2017, [online] 2017), and especially common bonds, which is the biggest problem. Through common money, the EU is going to be inconspicuously pushed in the creation of one big super state. And, in the preparation stage, a lot of people are not even going to understand this. All countries are going to borrow at the same high rate for their operations: An overdebted country is going to borrow under the same conditions as Germany with the best rating. This is as if you offer a new interest-free loan to an overdebted person. What is this person going to do? They are either going to save or borrow even more, as they have always lived on debt. Macron is actually starting pan-European credit



spiral guaranteed by Germany. On the other hand, German ministry of finance has created a plan how to transform the Eurozone firewall, meaning European Stabilization Mechanism (ESM), into a fully fledged European Monetary Fund (EMF). The key idea are semi-automatic rules which would lead to the restructuring of sovereign debt of the assistance recipients. Monetary fund would provide assistance and then it would take the money back by 'stripping' private creditors.

European Commission (EC) wants neither Eurozone budget, nor Eurozone minister of finance. And against, this stand European ministers of finance, who have swept from the table all reform proposals, both, from Macron, and from the EC. German proposals are not acceptable for the French and Italians. The French proposals are not acceptable for the EC and the EC proposal is unacceptable for everybody, as is the idea of Martin Schulz regarding the United States of Europe. In this situation, is any reform of the EU ever going to happen? If so, it is not going to be through a normal political process, but only as a consequence of some other crisis, which is going to endanger the wealth of Northern states. But it is true that Macron understands the term 'more Europe' as, for example, banking union (BU). In the general sense, this means: unified banking supervision, unified crises resolution and common deposit insurance.

In the background of this requirement is the unceasing fear of over-debtedness of the South of Europe. The fact that some people think that the Greek debt has been solved does not yet mean it has. Paris and Berlin are well aware that Eurozone is still divided into overdebted South and rich North, which is not a good foundation for a political union. Debt crisis in the South still smoulders. That is why there are thoughts of transforming 'Euro-firewall', the mechanism, due to which Slovak government fell a few years ago, from European Stabilization Mechanism (ESM) into European Monetary Fund (EMF). That is why France is suddenly so much interested that the whole of the EU, including PL, CR, RO, HU, BG, pays by Euro. That is why sudden threats that those who are not in the core of the EU will be met by a disaster because somebody must actually pay for the EMF and the more countries participate, the lesser expenses for France (Saxo Bank, 2017,[online] 2017).

Originally, the EU had two temporary funds for crisis assistance. When it showed that the debt of the South of Europe cannot be solved quickly, the EU has created a permanent ESM fund. And now, it wants to bloat this fund so that it plays similar role to that of the IMF in developing countries. EMF is supposed to be controlled directly by the European Parliament (EP). So, more institutions, more bureaucrats, even bigger budget and even less transparent supervision, because when something is not run by an individual, but several hundred of retired European politicians who are now members of the EP, nobody effectively bears direct responsibility.

Through this all, we are in fact just getting ready to transfer the debts of the South of Europe to the whole Europe, including the Czech Republic. European rulers have finally understood that the problem of South European debt is not temporary, but a chronic disease. Nowadays, despite all efforts, the proportion of Greek debt against GDP is even higher than before crisis. And that is despite the fact that partial debt cancellation has been provided to Greece. In other countries, it is similar. The debt has only been shifted in time. What was supposed to be paid off in the near future is supposedly going to be paid off in a more distant future, when the current rulers will no longer be alive (Pikora, 2018, [online]) supposedly. In reality, it is a public secret that the debt has already become unpayable. That is why I understand French-German push for the EU integration, which is, however, going to trigger a reaction. Leaders of Central and Eastern European countries are going to exercise resistance against the French-German idea to create common European Ministry of Finance and Defence and Schulz (SPD) is dreaming of the creation of the United States of Europe (USE). In my opinion, this is the

beginning. Countries, which will be interested to share his vision of European future, could, according to him, create a group dedicated to the ‘reconstitution’ of Europe, or the USE. According to Macron, in the future EU, i.e. USE, which will go through renaissance and which will be simpler, Great Britain is going to have its place again, even though it decided to leave the EU in 2017.

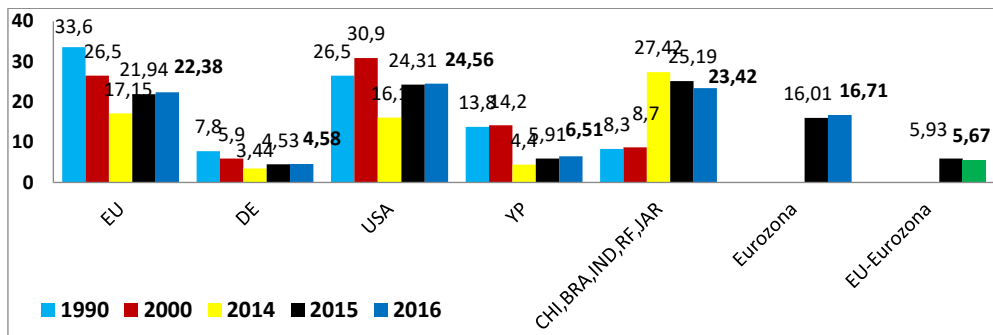
### 3. What is the Current Condition of the EU, or, What Can we Expect from a New Future Federation of the United States of Europe?

We need “more Europe”! The question is what mins “more Europe”? Does the EU want the creation of the common Eurozone budget? It wants the common minister of finance and it especially wants common bonds. As mentioned above, common money (€), is gradually going to lead to the creation of one big superstate, which many do not quite understand. Cost-benefit analysis shows that such Europe (USE) would be more competitive, but only if all the EU member states were part of Eurozone!

In 2017, the GDP of countries using Euro increased by 2.5 %. The economy of Eurozone thus registered the highest speed of economic growth in the last ten years, as a quick estimate published by Eurostat statistical office suggests. In 2016, the GDP grew by 1.7 %. In 2017, Eurozone economic expansion surpassed that of the USA, whose economy grew by 2.3 %.

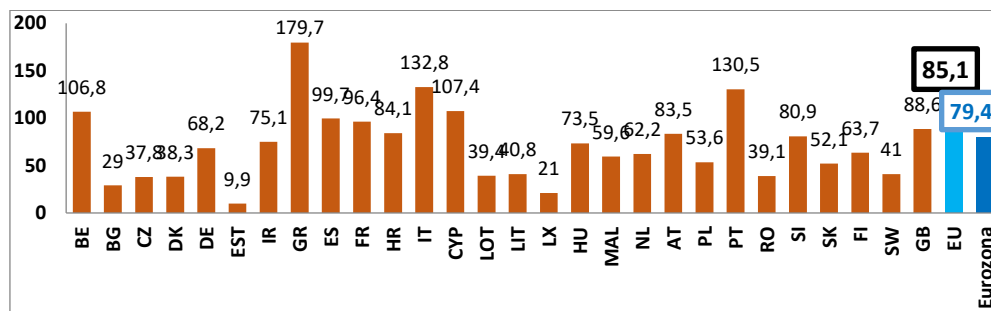
According to the AP agency, favourable data regarding the evolution of economy in 2017 provide clear evidence that Eurozone has been able to exit a protracted debt crisis, which previously caused worries about the survival of the single currency. In 2016, the share of the hypothetical USE with the payment currency of Euro in the world GDP would have been 22.38 % (If we subtract the Eurozone countries, the other EU countries have only 5.67 % world GDP). This is one of the reasons why we need all EU countries in the Eurozone. Thus, the USE would have been an important player in the de-globalized world, together with the USA (24.56 %) and China (14.76 %); the three economic superpowers combined representing 61.72 % of the world GDP (Figure No.1).

Figure 1: Share of Eurozone and All EU States in Total World GDP (1990–2016, %)



Source: World Bank, 2017

**Figure 2: Government Debt to GDP 2016 in %**

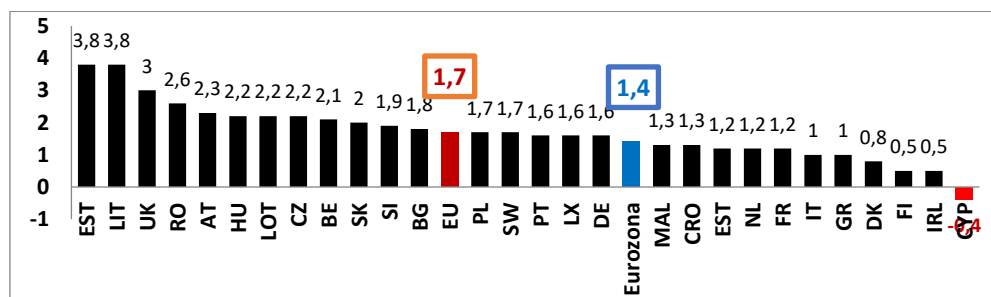


Source: Eurostat 2017, FM, 2018

Public debt in the Eurozone is on average higher than in countries outside the Eurozone. In the Eurozone, public debt is on average 79.4%. In EU countries, which are not in the Eurozone, only 53.99% (see Figure No.2).

QE – loose policy is convenient for indebted people and countries, especially in the South of Europe. In December 2017, the inflation rate in Eurozone was only 1.1 %. For this year, the ECB expects the inflation rate of 1.7 %. In Eurozone, the inflation is difficult to raise to the average of 2%, which was the role of QE. QE is only effective if printed money gets into circulation in real economy of Eurozone, which is not happening (see Figure No.3).

**Figure 3: EU and Eurozone Inflation (VI/2017)**



Source: Eurostat VIII/2017

In December 2017, the core inflation, which reflects the real inflationary pressures while not considering food and energy prices, stagnated at 0.9 %! In January 2018 it stood at 1.3 % in Eurozone (Eurostat, 2018). Thus, it is significantly below expectations. Nevertheless, the opinion that in 2018/19 inflationary pressures are going to increase seems to be gaining more support among central bankers. Unfortunately, the world is complex and one swallow does not make a summer. In May 2018, a concrete proposal for the multi-annual financial framework for the period of 2021-2027 is supposed to be presented. According to Juncker, everything should be agreed in spring 2019, meaning it would be before the next European Parliament elections (Euroactiv, 2017, [online] 2018).

The policy of zero interest rates together with the increasing inflation is destructive for German savers, but the total indebtedness in Eurozone decreased in 2016, trend, which also continued in 2017 due to quantitative easing (QE). At the beginning of December 2016, the ECB

extended the programme of bond purchase by nine months – until the end of 2017. At the same time, the ECB also decided to reduce monthly volume of bond purchases from the current € 60 billion to € 30 billion since April 2018. The ECB target for the annual inflation rate in Eurozone is just under 2 %. This development reflects the diminishing influence of a sharp oil price decrease. In the next few months, the inflation rate in Germany will probably achieve the ECB's target rate.

Expansive monetary policy leads to the record increase of indebtedness and discourages governments from structural reforms. The world can still feel the effects of the recent financial crisis and the possibility of further shocks cannot be eliminated. The volume of the world public and private debt has reached historical peaks and it is necessary to start decreasing it. We need to abandon the current monetary policy in time and return back to more normal environment. Federal reserves of Germany have already started the process, however, it is not so in the EU. Or does the EU have the plan how the USE will react?

It is going to be necessary to introduce the envisaged capital markets union. Otherwise, the Eurozone and the EU, or newly established USE, will have to solve technical problems with a weak common, but not single, currency on their own. The problem of Eurozone is structural. Eurozone is not competitive, there is little investment, the trust of firms and as well as households in future economic development stays low. The only thing the ECB can do is to provide common government policies with time for ideas. Some basic ideas regarding the establishment of the USE could be:

- For the years of 2018/19 there is the necessity to invest in infrastructure within the frame of increasing productivity. For the beginning, it would be advisable to prudently invest in infrastructure so that productivity that will translate into improved living standard can be increased.
- Eurozone needs the capacity to ensure sensible and coordinated anti-cyclical fiscal policy reaction in case of another recession. In the next recession to come, there will be little space for aggressive monetary easing and there will be the need for a fiscal authority, which would, in case of a serious drop, increase expenses.
- An initiative with the purpose of strengthening legal state should be proposed (Press, 2017, [online] 2018). However, this does not necessarily mean the creation of the USE.
- QE – In my opinion, quantitative easing of the ECB will end by 31st December 2018. I am convinced that the ECB is going to announce the end bond of purchase no sooner than in September or at the end of summer 2018 or the purchase is still going to continue.
- The increase of interest rates is then estimated for 2019.

In 2018, the rate of growth in Eurozone will be similar to that in 2017, since there is no reason to expect a significant slow-down. Unlike in the previous years, the highest risk of growth lies outside the EU borders, especially in China and the USA. Nevertheless, the reforms of monetary union and labour market in Italy are necessary (Elčić, 2018 [online] 2018). And what is the position of the Visegrad four countries? Czech, Poland, Hungary and Slovakia want strong Europe, which they see as the union of independent states, rather than as the USE. The prime ministers of the Visegrad Four countries agreed on this view in a panel discussion held on 26.1.2018 in Budapest (Novinky, 2018 [online]).

- Under the frame of the continuous strengthening of the EU democracy, the EC must present a proposal for the creation of the post of permanent and accountable European minister of economy and finance, the initiative for the strengthening of the subsidiarity

and proportionality principles and the communication on the improvement of the efficiency of the EU presidency.

- The need to create the space for their own fiscal policy in Eurozone or the USE before the next recession. In my opinion, it is necessary to prepare for the next recession by the creation of an anticyclical fund.
- Unified banking supervision and unified resolution of banking crises along with common deposit insurance.
- European budget and the minister of economy and finance for Eurozone and the parliament for Eurozone, which will be the base for the creation of the USE.

### ***3.1 The Constitutional Drafting: Lessons and Frameworks***

The member states nowadays need the EU more than ever before; and the EU has never been more dependent on the support of its member states. The decisive actions need to be taken – a new constitutional process and a new draft constitution of the EU is needed. We thus envision the beginning of a new constitution drafting process at the academic level. Lessons may be considered from the founding fathers of the US Constitution and the US Supreme Court; the founding fathers of the European Community and the EU; the Court of Justice of the EU. Robert Badinter's *Une Constitution Europeene* (2002); EU founding Treaties; draft Treaty for the EU Constitution and EU Charter of Fundamental Rights. The following issues and tasks may be envisioned related for example to:

- **Self-determination** - The rights of European people and nations to self-determination: rules for the transfer, withdrawal, and separation of sovereign powers among peoples, national Member states and the EU; dualism of the electorates of member nation states and the electorate of the EU.
- **Markets and finance** - Economic, fiscal and financial integration: the three freedoms and common monetary system.
- **Democracy** - Democratic legitimacy and accountability of political actors: electoral system; division of powers among Parliament, Cabinet and Judiciary; the rule of law; the inalienable Solange powers of member nation states.
- **Government** - Sovereign powers of the EU: legal protection and judicial system; protection of outer borders and law enforcement system; defense system and military forces; security and intelligence system; foreign relations and international representation.
- **Balanced union** - EU specific integration: balancing and inclusion of responsible governments, free markets and civil societies on local, regional, national, and the Union levels.

**New area of exclusive competence** was added – that of the control of external borders of the Union's inner area of freedom and security. Competencies in the areas of foreign affairs, security and defense were elevated to the Union's explicit shared competencies where the EU exerts sovereign rights conferred on its federal level by the Member states. The structure and competencies of legislative institutions are reduced to the bi-cameral Parliament, which is substituting the present institutions of the European Council, Council and Parliament.

Functions of the present Commission are transferred to the executive branch, represented by the monocratic body of the President, to be elected by the direct vote of the EU citizens, or, alternatively, by members of national Parliaments. Thus powers of the hardly effective

Commission composed of 27 members, everyone representing one of the Member States, are conferred on the President, following the US example.

I think that we in EU need the decisive actions to be taken – a new constitutional process and a new draft constitution of the EU is needed. Because we see today the some following issues and tasks may be envisioned related to:

- the new peaks of the 2015-18 waves of migrants across mostly undefended outer borders of the Schengen-area exposed profound weakness of existing Schengen and Dublin mechanisms, and thereby of the key features of European Union's constitutional status of a state, i.e., a federal state, a federation of state, or the Union,
- Will Dublin 2 accepted in Goteborg - Sweden (XII/2017) to solve all of the problems of Dublin 1? This will show the future, but there are still unresolved issues.

I'm sure it will be necessary to reform the EU monetary union and also labour market for example in Italy or Spain's growing debt including Greece. Recovery is going to continue thanks to quantitative easing and low ECB interest rates, increasing domestic demand, and especially due to investments, which are expected to accelerate in 2018. According to a majority of economists, quantitative easing of the ECB will end by 31st December 2018. The most common estimate says that interest rates will increase in 2019, or possibly as late as 2020! Bankers expect the improvement of the situation in Eurozone especially due to the deepening of the monetary union, as advocated by Macron. According to bankers, it is necessary to prepare for the next recession by the creation of an anti-cyclical fund. Eurozone needs the capacity to ensure sensible and coordinated anti-cyclical fiscal reaction during the next recession. In the next recession, there will be little space for aggressive monetary easing and there will also be the need for a fiscal authority that would be able to increase expenses in case of a significant drop. Or we can have three causes (B. Kuras, 2008), and the first is the illusion of what we understand, what is happening, and therefore we are able to predict. Unfortunately, I think it does not apply in EU economic policy (Brexit, emigrants, boundaries, etc.) because we are not able to predict what we want. The biggest concern I have from that idea did not win introduce a Europe-wide tax that would have a hole at the British posts healed. It's a step in the sausage method of trying to establish USE.

For the years 2018/19, it is necessary to invest in infrastructure under the frame of increasing productivity. Unregulated capital flows may destabilize the economies of the EU member states and deepening social inequality may have negative effect on growth since new economic paradigm for global era has not yet come to existence. In the existing vacuum, protectionism, anti-trade populism, and non-liberal, often xenophobic, nationalism are gaining grounds. These are further fed by the fear of wage stagnation, unemployment caused by new technologies along with the future fourth technology revolution, and increasing uncertainty.

#### **4. Conclusion**

We cannot expect that the EU and Eurozone will be able to get out of economic-financial crisis in the near future. The EU would have to move from simple dependence on outsourcing to the autonomy of more mature development, sophisticated division of labour and optimum structure. So, simple financial stimulus is no more going to suffice. The problem is structural, Eurozone is not competitive, there is no investment, the trust of firms and households in future economic development remains low. These are issues that cannot be solved by deflation. Qualitative transformation is necessary. QE, which effectively stimulated economic growth in the USA as it operated through capital markets, does not work in Europe. And how will Europe cope with the fourth technology revolution?

For more optimistic Eurozone and EU perspectives, is the acceptance of the USE in the EP and the EU member states parliaments going to be enough? I do not think this is just a dream of a few statesmen. However, before the creation of the USE is approved, much time is going to pass. It is not going to be easy, because the EU is not unified. Moreover, long-term political procedures, which must be approved by the parliaments of all EU member states, exist. This does not make the issue any easier. Is this utopia of Napoleon Bonaparte in the past, and Macron or Martin Schulz (former EP President) at present going to be realized?

According to my opinion, the USE might become reality. But it is going to take years; the USE may not be finalized in 2025, but much later, maybe. This is the reason why nowadays, no real conditions for the creation of the USE exists. However, this is still something we may consider for future and we are not far from reality. This is one of the ways that the EU stays together.

## References

- [1] EK (2017). *Hospodářská a měnová unie euro*.
- [2] EU Office (2017). Pět scénářů budoucnosti Evropské Unie. *Měsíčník EU Aktualit*, iss. 163.
- [3] Euractiv (2017). *Budoucnost EU* [online]. [cit.2018-01-18]. Available at: <http://euractiv.cz/clanky/budoucnost-eu/sef-komise-juncker-predstavil-pet-scenaru-budoucnosti-eu/>.
- [4] Euractiv (2017). *Evropské fondy* [online]. [cit.2018-01-18]. Available at: <http://euractiv.cz/clanky/evropske-fondy/evropske-fondy-bychneskrtal-ale-staty-se-musi-naucit-cerpat-rika-juncker/>.
- [5] Euractiv (2018). *Aktuálně v EU* [online]. [cit.2018-01-18]. Available at: <http://euractiv.cz/clanky/aktualne-v-eu/eurostat-eurozonavzkveta-loni-predhodila-i-usa/>.
- [6] Europa (2017). *Eurostat* [online]. [cit.2018-01-18]. Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Government\\_finance\\_statistics#Main\\_tables](http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_finance_statistics#Main_tables).
- [7] Europa (2017). *Events* [online]. [cit.2018-01-18]. Available at: [https://ec.europa.eu/epsc/events/shaping-our-futuredesigning-next-multiannual-financial-framework\\_en](https://ec.europa.eu/epsc/events/shaping-our-futuredesigning-next-multiannual-financial-framework_en).
- [8] Europa (2017). *Press release* [online]. [cit.2018-01-18]. Available at: [http://europa.eu/rapid/press-release\\_IP-17-4002\\_cs.htm](http://europa.eu/rapid/press-release_IP-17-4002_cs.htm).
- [9] Europa (2018). *Eurostat* [online]. [cit.2018-01-18]. Available at: <http://ec.europa.eu/eurostat/en/web/products-press-releases/-/2-30012018-AP>.
- [10] Europa (2018). *Info* [online]. [cit.2018-01-18]. Available at: [https://ec.europa.eu/info/business-economy-euro/economicperformance-and-forecasts/economic-forecasts/autumn-2017-economic-forecast\\_en](https://ec.europa.eu/info/business-economy-euro/economicperformance-and-forecasts/economic-forecasts/autumn-2017-economic-forecast_en).
- [11] Europa (2018). *Eurostat* [online]. [cit.2018-01-18]. Available at: <http://ec.europa.eu/eurostat/documents/2995521/7826125/2-23012017-AP-EN.pdf>.
- [12] Europa (2018). *Commission* [online]. [cit.2018-01-18]. Available at: [https://ec.europa.eu/commission/white-paper-future-europe-reflections-and-scenarios-eu27\\_cs](https://ec.europa.eu/commission/white-paper-future-europe-reflections-and-scenarios-eu27_cs).

- [13] Eurostat (2017). Government Finance Statistics. *Public balance and general government debt, 2013–2016*.
- [14] Ihned (2017). *Byznys* [online]. [cit.2018-01-18]. Available at: [https://byznys.ihned.cz/c1-66002990-bankeri-veri-v-pokracujici-rust-ekonomiky-eurozony-prekazku-by-ale-mohly-predstavovat-cina-nebo-italie?utm\\_source=www.seznam.cz&utm\\_medium=sekce-z-internetu](https://byznys.ihned.cz/c1-66002990-bankeri-veri-v-pokracujici-rust-ekonomiky-eurozony-prekazku-by-ale-mohly-predstavovat-cina-nebo-italie?utm_source=www.seznam.cz&utm_medium=sekce-z-internetu).
- [15] Jambrek, P. (2017). *Formal elements of the legal outline of the draft*. Ljubljana.
- [16] Kuras, B. and Taleb, N. N. (2008). The Black swan, The impact of the Highly Improbable (Historii tvoří černé labuť). *Euro*, vol. 52, iss. 22. December, 2008, pp. 62-63.
- [17] Lidovky (2018). *Machacek* [online]. [cit.2018-01-18]. Available at: [https://www.lidovky.cz/machacek-jak-nereforma-eurozony-ohrozuje-eu-fmi-monitor-jana-machacka.aspx?c=A171218\\_132253\\_monitor-jana-machacka\\_mpr&utm\\_source=www.seznam.cz&utm\\_medium=denni-tisk#utm\\_source=rss&utm\\_medium=feed&utm\\_campaign=ln\\_lidovky&utm\\_content=main](https://www.lidovky.cz/machacek-jak-nereforma-eurozony-ohrozuje-eu-fmi-monitor-jana-machacka.aspx?c=A171218_132253_monitor-jana-machacka_mpr&utm_source=www.seznam.cz&utm_medium=denni-tisk#utm_source=rss&utm_medium=feed&utm_campaign=ln_lidovky&utm_content=main).
- [18] Macháčka, J. (2017). Jak ne-reforma eurozóny ohrožuje EU. *Lidovky*, iss. 18. 12. 2017.
- [19] Margan, F. (2018). A collection of data from international conferences and personal conversations with some representatives of the EU, meetings in Berlin, Paris, Brussels, Madrid, Ljubljana-Bled, etc.
- [20] MMF (2017). Východ Evropy má ekonomické potíže, bude ještě hůř. *Novinky*, iss. 2017.
- [21] Novinky (2017). *Ekonomika* [online]. [cit.2018-01-18]. Available at: <https://www.novinky.cz/ekonomika/443230-mmf-vychod-evropy-ma-ekonomicke-potize-bude-jeste-hur.html>.
- [22] Novinky (2017). *Zahraniční* [online]. [cit.2018-01-18]. Available at: <https://www.novinky.cz/zahranicni/evropa/457198-zmenme-eu-ve-federaci-anesouhlasici-cleny-vyhodme-rekl-radikalne-schulz.html>.
- [23] Novinky (2018). *Zahraniční* [online]. [cit.2018-01-18]. Available at: <https://www.novinky.cz/zahranicni/evropa/461716-visegradska-ctyrka-chce-eu-jako-svaz-nezavislych-statu.html>.
- [24] Páral, V. (2012). Nobel rotující, *Euro*, vol. 42.
- [25] Páral, V. (2018). Macron s Merkelovou už brousí nože. *Reflex*, iss. 18. 1. 2018.
- [26] Pascal F. (2014). *Europe in 12 lessons, EU, Directorate-General for Communications*. EC.
- [27] Reflex (2017). *Komentare* [online]. [cit.2018-01-18]. Available at: [http://www.reflex.cz/clanek/komentare/84520/ekonom-vladimir-pikora-macron-s-merkelovou-uz-brousi-noze.html?utm\\_source=www.seznam.cz&utm\\_medium=denni-tisk](http://www.reflex.cz/clanek/komentare/84520/ekonom-vladimir-pikora-macron-s-merkelovou-uz-brousi-noze.html?utm_source=www.seznam.cz&utm_medium=denni-tisk).
- [28] Sandro E. (2018). Bankéři věří v pokračující růst ekonomiky eurozóny, překážku by ale mohly představovat Čína nebo Itálie. *Hospodářské noviny*, iss. 28. 12. 2017.



- [29] Saxo Bank (2018). *10 šokujících předpovědí pro rok-2018*.
- [30] Schwab, K. and Sala-i-Martin, X. (2017). The Global Competitiveness Index 2017–2018 Rankings. *The Global Competitiveness Report, 2017-18*.
- [31] Stelter, D. (2018). Was wird die Erde zerstören? Weder Terrorismus, noch Asteroiden, noch Krieg. Laut Ökonomen wird etwas Größeres kommen. *Frankfurter Allgemeine Zeitung*, iss. 12.märz 2018.
- [32] W4T (2017). *Saxo-bank* [online]. [cit.2017-12-12]. Available at: <https://www.w4t.cz/saxo-bank-10-sokujicich-predpovedi-pro-rok-2018-65854/>.
- [33] World Economic Forum (2018). *Annual Meeting 2018: Forum Foundations*. Davos-Klosters.
- [34] Worldbank (2017). *Data* [online]. [cit.2018-01-18]. Available at: <http://data.worldbank.org/data-catalog/world-development-indicators>.
- [35] Worldbank (2017). *Data* [online]. [cit.2018-01-18]. Available at: <http://databank.worldbank.org/data/download/GDP.pdf>.
- [36] Worldbank (2017). *GDP projections* [online]. [cit.2018-01-18]. Available at: <http://data.worldbank.org/data-catalog/global-economic-prospects>

## Mahoran Migrants, Second-Class Citizens?

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### **Abstract**

*While the citizenship of the European Union encompasses a great diversity of citizens (workers/inactive, continental/outermost), practices show that not all EU citizens benefitting from the fundamental right of freedom of movement are on the same footing. The paper's aim is to better understand the phenomena of failure of integration of Mahoran people residing in Réunion island. It will raise up the question of complaints of local population viewing Mahoran as abusers of rights (benefit tourism) or as a potential threat to public policy. As local discrimination towards Mahoran is very similar to that of EU citizens from Roma origin on the European continent, the paper will first compare these two categories of migrants. It will investigate then the accuracy of their being considered as second-class migrants. Finally, it will question the practical openness and adaptability of the right of freedom of movement of persons to specific EU citizens with visible cultural and physical differences as Mahoran and Roma migrants.*

**Keywords:** *freedom of movement, Mahoran, migration, outermost regions, Roma, union citizenship*

**JEL Classification:** *K3, P16, I30, J60, J70*

### **1. Introduction**

European citizenship comprises different categories of citizens including continental EU citizens and Outermost EU citizens. The latter are citizens of the Outermost Regions of the European Union, which are islands or archipelagos in the Caribbean (Guadeloupe, Martinique, Saint-Martin), Atlantic (Canaries, Madeira and the Azores) and the Indian Ocean (Réunion, Mayotte), except for Guyana, which is a small enclave in the Amazon region. These remoted regions are regulated by Articles 355 and 349 TFEU. Despite of their geographical distance from the European continent, the Outermost regions are full part of the EU and their citizens are full EU citizens. Therefore, Outermost regions must apply EU law and outermost citizens can enjoy EU fundamental rights. There are a few derogations to this general rule like, for example, the exclusion of Outermost regions from the Schengen area. Indeed, the insularity of these outermost regions combined to their geographical position justify the maintenance of control at their borders in the name of security requirements and of migration control (Lamblin Gourdin, 2016). In practise, it means that French citizens (from continental France or other French outermost regions), citizens from the other Member States of the EU or third-country nationals have to be controlled by local police at their arrival in Réunion island. Actually, outermost regions of the EU are representing the external borders of the European Union outside the European continent in the Indian Ocean but also in other places where the Outermost regions are present.

Nevertheless, inhabitants from the Outermost regions of the EU are populations with ethnical and cultural characteristics different from the population of continental EU territory (Ziller, 2012). Additionally, they often suffer from lower employment rates and from low education levels than the EU continental average. That is why incoming migration, especially of poorer foreign populations, is likely to cause fear among the native-born Outermost citizens.

The present article will focus on one category of EU Outermost citizen, the Mahoran population (from Mayotte island in the Indian ocean) migrating to another Outermost region, Réunion island. Generally speaking, this movement of population concerns the migration of EU citizens between two EU Outermost regions. But as both Outermost regions are French oversea departments, it must be considered legally as French internal migration regardless of the thousands of kilometres of sea separating both Outermost regions. Despite of its purely legal national dimension, this migration remains, for the migrants, difficult as there is a big cultural gap between Réunion island and Mayotte, a gap much deeper than between France and Belgium, for example.

The Mahoran citizens, who are migrating to Réunion island to flee poverty, are not welcomed by local population viewing them as abusers of rights (social/benefit tourists) or as a potential threat to public order (trouble-makers). Strangely, these French citizens are less appreciated than third-country migrants like Malagasy and Mauritian or EU citizens from continental Europe. Local discrimination towards Mahoran is very similar to that of Union citizens from Roma origin on the European continent, who are sometimes called second-class European Union citizens referring to their difficulties to enjoy fully their rights deriving from EU citizenship (Lhernoud, 2011). Shall we call also Mahoran, second-class EU citizens i.e. as persons whose rights and opportunities are treated as less important than those of other? This statement would require studying Mahoran's migration to EU continental Europe. As the article is focusing on Réunion island as the receiving country, a more appropriate question would be: Are Mahoran who are using their right to move to another French Outermost region Second-class French citizens? Whether second-class EU citizens or second-class French citizens, it is obvious that the situation of Mahoran is very similar to that of EU citizens from Roma origin.

The first part of the article will deal with a comprehensive comparison of both categories of migrants including common characteristics and distinctions. The second part will consider the qualification of second-class citizens for both types of migrants.

## **2. Mahoran and Roma Migrants Between Similarities and Distinctions**

At first sight, Mahoran and Roma migrants have a lot in common as their integration into the host society is visibly encountering the same difficulties. But what distinguishes them is obviously their legal status, generating different rights.

### **2.1 Common Characteristics**

The laborious integration of Roma and Mahoran migrants into their host country highlights some common characteristics that can explain the challenge of migrants with specific features. These common characteristics which are mainly of social, economic, cultural and physical nature are accompanied by a rejection of the local population.

### *2.1.1 Social and Economic Characteristics*

Mahoran and Roma migrants present many common characteristics, especially social and economic, that explain their need to migrate elsewhere. Both Mahoran and Roma migrants are leaving their country of origin mainly to run away from extreme poverty. In the case of Roma migrants, there are also fleeing local discrimination in the home country as a minority (FRA, 2009). This is not the case for Mahoran citizens leaving Mayotte as they constitute most of the population of Mayotte.

Both categories of migrants are mainly economically inactive migrants moving in search of a job in the host country. A great part of these economically inactive migrants is non-self-sufficient. Their situation of poverty in the receiving country leads them to be accommodated in social housing, unhealthy or illegal housing or ghettos, which makes their integration into the host society harder. Their lack of financial resources also makes them dependant on social and medical assistance, when it is available to them. Indeed, access to social assistance remains, in most Member States, far from being unconditional and so accessible to only a few (Minderhoud, 2009). Moreover, the extreme poverty which characterizes many of Europe's Roma communities is now being used against them to justify measures of expulsions (O'Nion, 2011).

These migrants are also often composed of the weakest part of the population, mainly poor women and children in search of better life and education. They usually have a low education level and poor language skills, which also does not facilitate their integration.

### *2.1.2 Cultural and Physical Characteristics*

While their social and economic characteristics are often independent of their will, Mahoran and Roma migrants are very attached to their own cultural and physical characteristics that they exhibit voluntarily.

First, both Mahoran and Roma migrants represent visible minorities that can be easily distinguished from the local population of the host country. Their visibility is due partly to their physical characteristics, which differ from most of population. They might have a darker colour of skin or specific African traits and so on. These differences are accentuated by the way they clothe themselves with traditional clothes or make-up. These two categories of migrants don't try to blend in with the local population and prefer to keep their traditions. They are also visible by their extreme poverty leading them either to beg on the streets, to wear poor and old quality clothes and to live in unhealthy accommodations.

The second cultural characteristic that distinguishes Roma and Mahoran migrants from the local population is their living in a kind of parallel society into the host country. This compromises a lot their integration. Why? Certainly because of their strong cultural habits, their attachment to their traditions, their extreme poverty and their unwillingness to assimilate totally to local population. Part of the Roma migrants have also nomadic habits, which scare the host society.

### *2.1.3 Negative Perception by Local Population*

What reassembles Mahoran and Roma migrant is also their negative perception by the local population of the receiving country. Indeed, they are often accused of benefit tourism and of unwillingness to search for a job.

They are also accused of threat to public policy (begging, prostitution, unhealthiest, theft, destruction of public property). They are viewed as trouble-makers rising local violence. This

negative perception has led, for example, several Western European States to depict Roma migrants collectively as security threats, whose presence has the potential to undermine the established, settled way of life (O’Nions, 2011). It also leads very often to racism and discrimination towards these two categories of migrants.

## ***2.2 Distinctions***

Despite of their numerous common characteristics, Mahoran migrating to Réunion Island and EU citizens from Roma origin migrating to other Member States of the EU are different on a certain number of points. Their main difference relies upon the type of migration involved, State internal migration versus EU internal migration, which involves different rights.

### ***2.2.1 The Receiving Country***

Mahoran moving to Réunion Island remain on the French territory and therefore are subject to French internal law. The host Member State is just a part of the territory of the country of origin. Nevertheless, regarding the general principle of prohibition of discrimination, local authorities in Réunion island are not allowed to favor French migrants from continental France or from other French outermost regions like Mayotte over citizens from other Member States. Of course, this statement does not apply to specific rights linked to French citizenship like the right to vote at national elections (Ziller, 2005). Mahoran migrants in Réunion island should be treated equally to other EU citizens migrants, at least.

EU Roma migrants moving to the territory of another Member State are using their fundamental right of freedom of movement of persons and therefore are subject to EU law, especially to Directive 2004/38/EC relative au droit des citoyens de l’Union et des membres de leurs familles de circuler et de séjourner librement sur le territoire des États membres.

### ***2.2.2 The Scope of Rights***

As French citizens, Mahoran migrating to Réunion Island benefit from total equality of treatment with the local population. They have total access to social assistance, social housing and medical care. On the other way, EU citizens from Roma origin are rarely benefiting from equality of treatment with nationals of their host country. Only those who are working are equal according to Article 24 (Directive 2004/38/EC). Economically inactive migrants have conditional residence rights and limited access to social assistance. Indeed, stays for more than three months require self-sufficiency (sufficient resources for themselves and their family members not to become a burden on the social assistance system) and a comprehensive sickness insurance cover according to Article 7 of Directive 2004/38/EC. Article 24 of the Citizenship Directive only provides access to social assistance to economically inactive migrants who are self-sufficient and stay for more than three months into the host country or are permanent residents. Obviously, there is a very difficult access to social assistance for economically inactive EU citizens from Roma origin, who don’t fulfil, most of the time, the legal conditions of Article 24.

The second important distinction concerns the right of residence. Mahoran benefit from a total freedom of movement while migrating to Réunion island. They can enter freely the territory of Réunion island and the length of their stay is not conditioned by their self-sufficiency. Similarly, they can’t be expelled from Réunion island as a State can’t expel its own citizens. On the other side, EU Roma migrants have to fulfil the conditions of Directive 2004/38/EC regarding entry and residential rights. Those who don’t respect these conditions can be expelled from the host country. Many EU citizens from Roma origin have been expelled on

the grounds of threat to public policy or security (Articles 27 and 28 of Directive 2004/38/EC), abuse of rights (Article 35 Directive 2004/38/EC) or unreasonable burden on the social security system of the receiving country (Article 14 of Directive 2004/38/EC). This was, for example, the case of the French massive expulsion of Roma migrants in 2010 leading the former Vice-President of the European Commission, Viviane Reading, to compare it to deportations from the Second World war. In fact, the right of freedom of movement, in practise, truly only exists for some (Gehring, 2013).

### **3. Are Mahoran and Roma Migrants Second-class EU Citizens?**

A citizen can be considered as a second-class citizen as far as its rights and opportunities are given or treated as less important than those of other citizens. This lower enjoyment of rights can be prescribed by the law as, for example, economically inactive EU migrants are legally disadvantaged in comparison to migrant workers, according to EU law. But it can also derive from an unjust implementation of rights by local authorities. Secondly, the categorization of ‘second-class’ citizen often refers to the discrimination of a certain category of population, treated differently from other categories. Thirdly, Mahoran and Roma citizens can be viewed as Second-class migrants because of their otherness highlighted by their visible poverty and cultural and physical characteristics.

#### ***3.1 First/Second Class Citizen Definition Deriving from Residential and Social Rights***

The Citizenship of the EU which was introduced by the Maastricht treaty in 1992 confer to the nationals of the Member States of the EU a certain number of rights that are quoted into Articles 20 and 21 TFEU and developed by the Court of Justice of the Union. As a Citizenship shared by all Europeans, complementing and not replacing national citizenships, EU Citizenship embodies shared rights and values as well as the rich diversity of a Union of different nationalities and languages (European Commission, 2017).

The first right mentioned by Article 20 is the right to freedom of movement. Freedom of movement of persons’ objective is ultimately equality of treatment between EU migrants and nationals of the host Member State. This aim has not been reached yet and some categories of migrants remain more equal than others, even if all of them represent a privileged category of migrants in comparison to third-country migrants. Current situation attributes total equality of treatment only for migrant workers who can be therefore considered as first-class Union citizens. Economically inactive migrants benefit from a differential treatment, limiting their residential rights and access to social assistance. They can be therefore considered as second-class Union citizens.

#### ***3.2 First/Second-Class Citizen Definition Deriving from Discrimination***

The aim of non-discrimination law is to allow all individuals an equal and fair prospect to access opportunities available in a society. First, it stipulates that those individuals who are in similar situations should receive similar treatment and not be treated less favourably simply because of a particular ‘protected’ characteristic that they possess. This is known as ‘direct’ discrimination. Additionally, it adds that those individuals who are in different situations should receive different treatment to the extent that this is needed to allow them to enjoy particular opportunities on the same basis as others (FRA-ECHR, 2011).

Discrimination on ethnical grounds is prohibited by numerous European legal instruments like articles 2 et 3 TEU and Articles 10 and 19 TFEU. Similarly, the Article 14 of the European Convention on Human Rights prohibits discrimination on the grounds of national or social

origin, association with a national minority, property, birth or other status. Article 21-1 of the EU Charter on Fundamental Rights states that Any discrimination based on any ground such as race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation shall be prohibited. Secondary law also protects against discrimination of an ethnical group with Council Directive 2000/43/EC of 29 June 2000 implementing the principle of equal treatment between persons irrespective of racial or ethnic origin.

Despite this legal arsenal, the practise shows that discrimination towards Mahoran and Rom is still a current and living problem. Both Mahoran and Roma migrants are not welcome into their receiving country and are considered as suffering from discrimination. They are discriminated at different levels as the behaviour of discrimination can come from the local natives of the hosting country themselves or from local authorities. Discrimination makes their integration, their access to work and to self-sufficiency very difficult and sometimes impossible.

Indeed, most of the EU citizens from Roma origin migrating western are economically inactive and therefore fulfil all the criteria to be qualified as “second-class Union citizen” (Lhernoud, 2011) or “unwanted foreigners”, “not true nationals” of EU Member States (Carrera, 2013) or “abnormal EU citizens”, “non-modern” (Carrera, 2014). A report from the European Union Agency for Fundamental Rights from 2009, The situation of Roma EU citizens moving to and settling in other EU Member States, clearly shows that poverty and racism are the main factors, which push the Roma to leave their country of origin (FRA, 2010).

After some scandals concerning non-lawful expulsions of EU citizens from Roma origin from certain Member States, the EU has undertaken positive measures to fight discrimination against this minority. Unfortunately, despite of all these efforts, both on EU and national levels (European Commission, 2011), NGOs are still denouncing the existence of strong discrimination against Roma migrants. Moreover, these positive measures aimed to reequilibrate the position of Roma migrants don't always serve their interests as it underlines their “otherness” while they should be considered as any EU citizen using its fundamental right of freedom of movement.

As far as Mahoran are concerned, the qualification of second-class French citizens is more appropriate in the context of an internal French migration between two French outermost regions. The absence of an EU element involving a migration between two different Member States excludes their reliance upon EU law and their potential use of the provisions of Directive 2004/38/EC.

### ***3.3 First/Second-Class Citizen Definition Deriving from Otherness***

Otherness, being different from the mainstream of migrants also lead migrants to a second-class category. Mahoran and Roma migrants as visible minorities are treated differently by local authorities and population. This is obvious in Réunion island where the “worse” is expected from this category of migrants. Even third-country migrants are better welcome. This is also the case of Roma migrants on continental Europe. Discriminatory treatment of EU Roma citizens having exercised their freedom to move has been legitimised because of their “nomadic” and abnormal behaviours, and due to their “lack of integration” into the mainstream nation and the cohesiveness of society in their countries of origin. Priorities has been therefore granted to the re-integration of EU Roma citizens in Romania and Bulgaria as a way to prevent them from re-exercising their freedom to move and discourage their “undesired form of cross-border nomadism” (Carrera, 2014).

#### 4. Conclusion

Mahoran moving to Réunion Island and EU citizens from Roma origin moving to another Member States are two categories of EU migrants using their right to move. The first category moves within the context of a State internal migration (despite of the 1435 kms separating the two islands) and the second category moves within the context of EU internal migration. Mahoran migrants are more privileged because they benefit from total freedom of movement and equal treatment with the nationals of the host State, but it does not help! Both categories are facing the same difficulty of integration into the host society.

It seems that, in terms of integration, strong poverty and strong visible cultural differences might penalize so much a migrant that the host society is forgetting about his/her privileged citizenship and treats him/her worse than a third-country migrant. This is the case of Mahoran migrants who are less welcome than Malagasy or Mauritian migrants while they just represent 20% of foreigners, Malagasy representing 55 %. Some studies have proved that this lack of integration into a multicultural society like Réunion is due to the feeling of Réunionese people that people from Mayotte are just benefit tourists. Similarly, Roma migrants are often worse treated than third-country migrants who are less visible and also viewed as benefit tourists.

The openness of host societies to ethnically different and visible migrants would require a more tolerant, opened and solidarity European society. Two obstacles are at stake, the openness and the acceptance of visible poor migrants and of visible ethnical differences. The existence of a very small number of abusers of rights or of threats to public policy or security among the migrants should not penalize the biggest part of migrants, who are moving in search of a better life. As the 2017 EU Citizenship report quotes, Union citizenship also means benefiting from equal treatment and sharing in a system of common values which the Union upholds, including respect for human dignity, equality and human rights, and inclusion, tolerance and respect for diversity (FRA, 2009). The case of Reunion island considered as a multicultural and multi-religion society shows that the main problem might be the extreme poverty of the migrants. Ethnical, cultural and physical differences are better accepted in the cases of self-sufficient migrants. The latter are supposed not to abuse their rights and not to bring violence into the host society. It would also require a better communication of the EU values, priorities and goals to all the EU citizens and a constructive dialogue regarding the acceptance of otherness of EU migrants (Mienkowska-Norkiene, 2016).

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#### *References*

- [1] Carrera, S. (2013). Shifting Responsibilities for EU Roma Citizens- The 2010 French affair on Roma evictions and expulsions continued. *CEPS*, No 55/June 2013, pp. 22-23.
- [2] Carrera, S. (2014). The Framing of the Roma as Abnormal EU Citizens-Assessing European Politics on Roma Evictions and Expulsions in France, In Guild, E., Gortazar Rotaecche, C.J., Kostakopoulou, D. (eds.). *The Reconceptualization of European Union Citizenship*. Leiden-Boston: Brill- Nijhoff, p. 61.



- [3] European Commission. (2017). *EU Citizenship Report 2017, Strengthening Citizens' Rights in a Union of Democratic Change*. [online]. [cit.2018-03-09]. Available at: [ec.europa.eu/newsroom/document.cfm?doc\\_id=40723](http://ec.europa.eu/newsroom/document.cfm?doc_id=40723).
- [4] European Commission. (2011). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions -An EU Framework for National Roma Integration Strategies up to 2020*. COM(2011) 173 final.
- [5] European Union Agency for Fundamental Rights-FRA. (2009). *The situation of Roma EU citizens moving to and settling in other EU Member States* (final edition). [online]. [cit.2018-03-09]. Available at: <http://fra.europa.eu/en/publication/2010/situation-roma-eu-citizens-moving-and-settling-other-eu-member-states>.
- [6] European Union Agency for Fundamental Rights, Council of Europe. (2010). *The Handbook on European non-discrimination law*, p. 23.
- [7] European Parliament and the Council. (2004). *Directive 2004/38/EC of the European Parliament and of the Council of 29 April 2004 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States amending Regulation (EEC) No 1612/68 and repealing Directives 64/221/EEC, 68/360/EEC, 72/194/EEC, 73/148/EEC, 75/34/EEC, 75/35/EEC, 90/364/EEC, 90/365/EEC and 93/96/EEC*. [online]. [cit.2018-03-09]. Available at: <http://eur-lex.europa.eu/legal-content/FR/TXT/?uri=celex%3A32004L0038>
- [8] Gehring, J.S. (2013). Free Movement for Some: The Treatment of the Roma after the European Union's Eastern Expansion. *European Journal of Migration and Law*, 15/2013, p. 27.
- [9] Mienkowska-Norkiene, R. (2016). Solidarity- A Forgotten European Value or Panacea to the EU Crisis? In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, p. 637.
- [10] Minderhoud, P. (2009). Access to Social Assistance Benefits and Directive 2004/38/EC. In Guild, E., Groenendijk, K., Carrera, S. (eds.), *Illiberal, liberal States, Immigration, Citizenship and Integration in the EU*. London: Routledge.
- [11] Official journal to the European Union. (2012). Consolidated version of the Treaty on European Union and the Treaty on the Functioning of the European Union. 2012/C 326/01.
- [12] Official journal to the European Union (2000). Charter of Fundamental Rights of the European Union. 2000/C 364/01.
- [13] O'Nions, H. (2011). Roma Expulsions and Discrimination: The Elephant in Brussels. *European Journal of Migration and Law*, 13/2011, p. 361.
- [14] Lamblin Gourdin, A.-S. (2016). Les îles en droit de l'Union européenne: des territoires comme les autres ? *RTDEur*. Juillet-septembre, p.582.
- [15] Lhernould J. P. (2011). Prestations sociales: les Roms roumains et bulgares ne sont pas des sous -citoyens de l'Union européenne. In *Abécédaire des discriminations, Six ans de délibération de la Halde. La Documentation française*. pp. 115–119.
- [16] Ziller, J. (2012). Les Etats européens et les territoires ultra-marins placés sous leur souveraineté. *Nouveaux cahiers du Conseil Constitutionnel*, No 35- avril 2012, p.1.
- [17] Ziller, J. (2005). L'Union Européenne et l'Outre-Mer. *Pouvoirs*, n°113 - L'outre-mer - avril 2005, p.11.

## **New Trends in Higher Education for Better Competitiveness of the European Union**

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### **Abstract**

*Institutions such as universities and research centers create knowledge or "technological infrastructure" of European cities. In this context, support for science and research is particularly important. It is precisely the results and level of science and research in individual countries that are, to a great extent, perhaps best described by the maturity of society, as is the competitiveness in the knowledge-oriented economy. The level of statehood in the field of science and research is also characterized by the position of national universities and universities in the world and Europe as such. An important role in this respect is played by innovation. Innovations drive the current globalised world and the sphere of education presents no exception. Role of schools, and in the presented theses especially role of universities, is therefore to motivate students to creativity and innovations via new methods and technologies, which provide them sufficient space for their own growth and further career development. The aim of this article is to analyse a set of texts dealing with the issue of innovations in European education, e. g. with methods of e-learning, micro-learning, MOOC (Massive Open Online Courses), PLE (Personal Learning Environment) etc., as well as the changes occurring in the field of higher education.*

**Keywords:** E-learning, European education, higher education in EU, innovation in education

**JEL Classification:** I21, I23, I25

### **1. Introduction**

Governments in general can help to open systems to innovation as they can create an environment of friendly innovation that encourages transformational ideas and fosters innovation within the system as well as creating opportunities for an influx of external innovation. In addition, governments can help strengthen professional autonomy and collaborative culture where great ideas are shared and redefined. Governments can help turn big ideas into reality providing access to funding and non-financial support to kick-start these ideas. Last but not least, governments can build incentives and signals that enhance visibility and demand after that, what really works. However, government activity has its limits. Silicon Valley works because government has created conditions for innovation and not because the government is doing innovation itself. Similarly, governments cannot innovate in school classes. One thing about innovations in education must be therefore clear - teachers, schools and local governments should not only be involved in the implementation of educational changes but should play a central role in their creation. These actors need to have detailed knowledge of what works if they are to become effective innovators.

## **2. General Characteristics of Higher Education in the 21st Century**

The education of the 21st century is largely different from its form in the previous century. The role of fixed institutions in providing higher education to the masses is immensely dominant, as they represent a great tradition of public education that has its roots in ancient times. However, as the world cope with globalization, international cooperation, outsourcing and digitization, some traditional institutions are struggling to maintain their leadership position in the 21st century. These institutions are forced to share their privileged access to a new generation of students with another powerful force - the Internet. Taking into account the recent growth of numerous e-learning courses specifically designed to work with distance learning and out-of-class work, traditional institutions must find a way to provide autonomous students, demonstrating the vision of free and accessible education to all as well as to maintain their valuable brand, coupled with elite capabilities and the unique expertise they provide.

While some of the concerned institutions have moved on to become universities of applied science and research, others discuss possibilities of shortening a 3-year bachelor's program or a combination of higher education and university in the form of a more efficient and less time-consuming institution responding to the requirements of the young generation of future students, as well as labor market requirements. In addition to the changes that take place at universities, substantial growth has been demonstrated in external education that is capable of functioning and delivering information at a fraction of traditional education costs and produces good results, creating a new kind of higher education within an existing system. Distance learning, covering everything from virtual universities to online courses, aims to democratize access to education (Kay, Cohen, 2012). By complying with a service requirement that effectively combines experts with their respective audiences, distance institutions basically ignore the relative distance and other barriers of the real world in the process, and thus create a movement of great importance for future education.

Currently, the rhetoric surrounding higher education institutions and the role of teachers in the teaching and learning process is sometimes extremely negative. Some aspects of criticism, such as criticism of lack of individual approach or excess of theoretical knowledge at the expense of practical, directed at schools and teachers, can be properly justified. The need for a more comprehensive solution remains legitimate, as solid higher education institutions remain a predominant force in obtaining a degree. However, how much the Internet can change, in relation to the broad-spectrum trend of relying on virtual connections and resources found on the Internet, no one can predict yet.

According to the UNESCO Statistical Institute, adult literacy is close to 98% in the developed regions of Central Asia, Europe and North America, whereas the average literacy rate is around 60% in the regions of Africa and South Asia. Despite the fact that numbers in developing countries, in the region of South and West Asia, have experienced a significant growth in literacy levels where it rose from 43% in 1991 to nearly 70% in 2015 (VanTassel-Baska, Little, 2016). The global trend of increasing literacy among adults leads to more specific types of literacy that help in other aspects of people's lives, such as financial literacy or digital literacy. According to the OECD, computer and information literacy is the ability of an individual to use a computer to explore, create and communicate for effective participation at home, at school, at work, or in a society. Two main factors of digital competence are subsequently described as collecting and managing information, which also includes the location and evaluation of information and the production and exchange of information that includes online security (Shavinina, 2013).

We live in a society that is heavily dependent on the exchange of different types of information on the Internet and where the total number of global IP traffic reached 1 billion gigabits per

month in 2016, a five-fold increase over the last 5 years (OECD, 2016). Enhancing digital literacy across age, social status and socio-cultural barriers is a very important factor in any thorough education policy. By providing the above mentioned skills to people, we will enable them to actively seek information, learn and evaluate independently. Globalization brings with it many threats, including attacks on personal security. After the nineteenth-century preoccupation with industrialization and the twentieth-century focus on modernization and development, the discourse on globalization has taken on the contemporary role of describing in a singular term the master pattern of recent and ongoing societal developments coupled with the sustainable development and growth (Bílý, Horváthová, 2016). Freedom of consciousness also empowers groups for which the traditional education system is either inappropriate, inaccessible or often simply unavailable. Freedom and relative availability of Internet connectivity equips new students with great power and previously unimaginable opportunities.

### **3. New Trends in 21st Century Learning**

#### ***3.1 PLE - Personal Learning Environment***

PLE is a place where students can not only acquire, improve and select educational content, but also choose tools that are key to their intentions, create their own individual learning portals, tag content, or sign in to resource sites where they find regular information on selected topics. Web 2.0 allows the transition from classical learning management systems (one-for-all, principle-based) to a personalized learning environment (by principle, one for me) that make up many parts, snippets and fractions or collections of tools and services, which are further constructed into individual and / or a shared country of knowledge, experience and contacts. PLEs are integrated systems consisting of a number of Web 2.0 elements, for example blogs, wiki systems, RSS readers, social networks, aggregators, educational content resources, etc. Payne(2009) defines PLE as "systems that help an educating student:

- Set Educational Goals;
- Manage the content and process of education;
- Communicate with other students during the learning process. "

PLE is a very subjective phenomenon, each individual adjusts his / her PLE to his / her taste and therefore a great degree of personalization is used. There is no precise definition of what PLE should look like, what it should contain, or how to illustrate it graphically. Most often, however, diagrams are dialed to include everything the student encompasses in their learning environment. It mainly includes non-formal and informal learning elements. PLEs are dynamic structures that change over time. Every component grows because our educational needs change. When compiling, it begins with a few components that, in the course of education, grow into the form of learning networks. However, it is always necessary to assume that each PLE has its educational goal. It does not matter what proportion of professional and personal interests we choose and what PLE components we choose. The learner becomes the curator of the educational content, transforms the acquired information into his / her knowledge and skills, cooperates with other students in the network - learning does not occur in the vacuum but requires collaborative cooperation and mutual sharing among PLE members (Kay & Cohen, 2012). Of course, PLE should be developed regularly, including adjustments to the diagram itself, which the student creates himself.

One of the typical representatives of educational entities in PLE is also the social media, which form an integral part of our personal, working and educational environment, meaning it has inherently become part of a modern society. Through social media we communicate with

friends, liaise contacts with business partners, watch current events in the world or in the field that interests us, connect with communities that share a common goal, work through social media remotely, share personal and working content, build through them our personal and corporate brand, communicating through them with our customers, often forming a filter for the content we consume, serving as a marketing tool, or a place where employees meet their employers, reflecting our personal and working lives, we spend on them hours for fun, fulfillment, personal development or the development of our knowledge and skills. With the massive growth of mobile devices, social media are becoming accessible at all times (Edquist, 2013). Every day we consume Facebook statuses, browse new LinkedIn profiles, entertain ourselves by browsing images on Pinterest or watch links to interesting and less interesting Twitter content. The need to write to someone, to call or to meet personally is replaced by the opportunity to get in touch with everyone and arrange by talking through social media.

Besides the sphere of entertainment and work, the social media also penetrate the area of education, where they play an increasingly important role. Social media offer a variety of opportunities to learn, acquire new information and change them to specific knowledge and skills. With technology and the Internet available from virtually every smartphone or tablet, individuals can always have their PLEs, including social media. Social media can be used by students for their education through a variety of tools for a variety of purposes, Facebook for communicating with friends or community, Delicious as a bookmarking system for links that they do not want to lose, Twitter as a micro-blogging service that constantly provides up-to-date information, Google Docs for collaborative work, YouTube for video training (YouTube has a separate section YouTube Education where you can find videos for educational purposes), and on the way to school or work, individuals can listen to podcasts and audiobooks (VanTassel-Baska, Little, 2016). In addition, students can be in contact with lecturers from online classroom through webinars (such as MasterClass) and hangouts or via Skype. Statistics show that there is only on Facebook 1.15 billion people, more than a billion on Google+ and Twitter has 550 million active users. Every 2 seconds a new user will join LinkedIn. There are every minute 24 new video uploads to YouTube and 2 billion of videos are viewed daily (Karyotaris, Moustakis, 2014). There are several benefits that speak for the inclusion of social media in their learning process such as the student can get into the community of the same-minded people, get support, feedback, advice and new information from people within the chosen social media. This environment promotes common learning and collaboration, information exchange, ideas and examples of good practices. Social media cross borders, are independent of culture, nationality, gender, skin color, which is their clear advantage. Anyone can use them for their intellectual enrichment, mentoring, contacts around the world, for up-to-date information, and the development of skills for the 21st century.

### ***3.2 MOOC - Massive Open Online Courses***

Stephen Downes and George Siemens came with the concept of MOOC in 2008 (World Economic Forum, 2014). This phenomenon promised further progress in network learning and was considered as an ecosystem of connectivism. MOOC is considered to be the last stage of development in education. MOOC company recorded the biggest boom in 2012 when the New York Times tagged the year 2012 as a year of MOOC. Horizon prognosed them with another significant increase for 2013, which really happened as the world, and schools and individuals began to discover the benefits of this new approach to education (VanTassel-Baska, Little, 2016). Great universities like Harvard, Stanford, MIT or Berkeley provide their education through online courses. Large players in this area have become Coursera, Udacity or EDX, with courses being attended by thousands of students from all over the world (Ács, 2015). The biggest advantage is obvious, as the world's best universities are available free of charge for

everyone via the internet. Those who would not otherwise be educated have the opportunity to listen to the lectures of the best professors from around the world. Therefore, the MOOC is an ideal tool for those who want to learn effectively.

MOOC offers an alternative to traditional formal/school education. Everyone can improve their knowledge and skills with the intention of increasing the chances of employment in the labor market. However, the 2014 Horizon report reflects the concerns that have arisen during the short "trial" period of the MOOC (Redmond, Lock, Danaher, 2015). Horizon mentions the low percentage of those who actually finish the courses (5-16%) and the fact that more work is needed to be done on cooperation and interaction of courses. Year 2013 is considered as the year in which MOOC "returned to the ground". In addition, there is an increased effort to formalize MOOC courses, that is, to introduce a credit system for passing the course as if a person would be a student at school, as demonstrated by the University of Colorado or the San Jose State University. MOOC have become the most discussed topics in the field of educational alternatives. Sebastian Thrun, one of the MOOC's pioneers, adds that it is essential to focus on greater involvement of the human factor in the course (World Economic Forum, 2014). People who take part in an on-line course have the opportunity to meet their colleagues in offline world. Coursera therefore establishes so-called Learning hubs, where students can meet their lecturers. The way the chosen course is run is more or less similar to all available courses. A potential user arrives at one of the learning platforms, chooses the course that interests him the most (or chooses a few courses), finds out more about the courses, what the course conditions are, what is the time grant, when the course starts, and then enters the course. During the course, a user will gain access to curriculums and teaching materials, which are mostly in the form of video and textual support. Student passes course lessons, each week a new lesson is available (Redmond, Lock, Danaher, 2015). The user continuously works on tasks, discusses in discussion forums with other course participants, completes tests and quizzes until the course ends. Most often, the course ends with a bigger test or a task if the student completed everything according to the given conditions, and at the end of the course he / she obtains a certificate of completion of the course or a certificate of the acquired knowledge. This is a standard course that can vary on different platforms, for example, in terms of course length, types of educational objects, course prices, and so on.

### ***3.3 Collaborative Learning***

Collaborative learning is a situation where two or more people are learning together and trying to learn something new. Internet and technology make it possible for us to learn with others in a global collaborative space outside the educational structures that have been the norm for centuries. New structures are located in an area where people can learn independently, the only question remains whether or not they can do it effectively. As it has been mentioned above, theory, which deals with common learning within social networks, is called connectivism. Downes and Siemens have pointed out that being a member of the online network, communicating with others, and filtering information and ideas that others produce, produces knowledge and expand educational horizons (Knox, 2016). Connectivity implies the active involvement of people in communication with others, instead of transferring knowledge from teacher to student. It also changes the role of the teacher because students have the opportunity to move from the environment in which the education is managed to the environment where they can run it themselves or in collaboration with other students on the network. A typical representative of collaborative learning is participation in the MOOC course, where participants have the opportunity to work on common tasks, projects, discuss together, advise each other on the problems, work on the taught topics, and formalities of the course in one

place, regardless of the location of their stay and the cultural background, from which they originate (Porter, 2015).

### **3.4 Microlearning / Micro-courses**

In response to the significant dropout of students enrolled in the online / MOOC courses, microlearning is used during the course. Microlearning is a learning where the studied subject is divided into small learning areas sometimes referred to as "knowledge-nuggets." Micro-courses are courses that do not require too much time for the student to complete a motivated course. The whole course takes about 1 hour, with individual lessons only a few minutes long, typically around 5-7mins (Knox, 2016). Individual lessons are small units of knowledge that the student can pay required attention. At the end of the course, students will feel more delightful than during typical course and are more likely to continue with the course. The question is how these lessons can be fill with enough content to add some value to a student. As an argument for micro-courses, we can state that they can be compiled individually from different courses to suit the student. An extensive database of knowledge is built on which the student can learn and compiled their course. If a student does not find a micro-course on the topic he / she wants to study, the quest can be originated, so someone can prepare such a course for him/her. There is, therefore, a sharing of knowledge in the community of people who have a common interest in the self-learning process. Micro-courses are available on the web via mobile apps too, especially for anyone who decides to use or create the micro-course, so he/she has everything they need: an application for creating a record, the Internet for its transmission and sharing. Micro-courses are available free of charge or for a fee, for example, for extended lessons, for accompanying material or for additional lessons beyond those introductory, and so on. Micro-courses can be used by individuals as well as by companies, in the event for example that its employees will record their know-how in this way, and then companies can create knowledge databases that will serve them for internal trainings, an internal wiki system, and so on (Redmond, Lock, Danaher, 2015). Micro-learning can take various forms, such as reading text, email or SMS, listening to podcasts, watching videos, memorizing vocabularies, phrases, and more.

### **3.5 Mobile Education**

Mobile technologies allow users to tailor their educational activities as never before. The development of an ever faster Internet connection and the ever-improving technological advances have resulted in the development of non-formal education, but also offer the challenges of formal education. In addition, it requires individual work of the individual when completing specific learning activities. It becomes part of a PLE of an individual, which can include, for example, micro-courses, curriculum of web content, communication with the group in collaborative learning, sharing, engaging in educational games, watching videos, storing content in cloud repositories (e.g. Dropbox) or complex systems (e.g. Evernote), managing everyday tasks (e.g. via Wunderlist) and more (Porter, 2015). In addition to the educational content itself, mobile applications offer methods to record or manage their educational backups. In one device, the user has a personal learning environment, control and self-management tools, and progress monitoring.

With the arrival of smartphones, tablets and e-readers, reading books, news and articles, watching videos, listening to podcasts, studying languages, social networking, just-in-time learning, BYOD (bring-your-own-device) at the schools, etc., has become easier. Thus, individual education has arrived to its simplest form so far. Examples of the use of tablets in teaching include, for example, Stanford Medical University, where new iPads are given to

newcomers to explore how they are used by students. For the time being, tablets seem to be a great helper for taking notes during lectures and, in particular, for quick access to information that students need to find out during their lessons. The tablet has become much more popular than a classic laptop. The enormous boom in mobile learning is experienced by the regions of Africa and the Middle East where the use of this type of education is growing, especially among companies that educate their employees. For example, India has expressed its preference to learn 86% of employees through mobile devices. According to Brandon Hall research, which deals with mobile education, 73% of organizations already use mobile education devices (Knox, 2016).

### **3.6 Adaptive Learning**

Despite the fact that thanks to new technologies substantial changes have been made, for example, in the sphere of trade, industry or the economy, the education remains the same, with exception of few bold efforts, as in the last century. On the other hand, big data, content portals, millions of blogs or e-book libraries hide a valuable source of information relevant to education. Adaptive Learning Platforms help you find, mark and organize study material, evaluate and deliver individual learning items, and use data mining to deliver optimized learning content to teach individuals every day. One of these platforms is Knewton, which is specific in its breadth and depth of educational content. Adaptive learning makes content dynamic and interactive, covering the most of the student's needs. The platform monitors how students interact with the system, evaluates the vast amount of information that a student produces during the learning process, and through interacting with content items in a communication with teachers and other students (Karyotakis, Moustakis, 2014). It can evaluate the current student knowledge and to determine what educational activities will bring the student the most benefits.

Adaptive learning can be integrated in the educational activities by both individuals and schools as its use allows teachers to be more concentrated on individual students, to solve specific problems with them, and to continuously direct them in what they should learn. Student and teacher each receive information to help them achieve better results and to improve overall. Main protagonists of platforms for adaptive learning are Knewton, Khan Academy and Udacity. Adaptive systems create an ideal tool for use in overturned classes. Knewton is based on a sophisticated, intelligent algorithm that can evaluate learners needs, give him the right resources to learn, recommend an online course or offer a learning path. It works with big data and data mining, making customizable and tailored content available for each student. For example, it is delivered to online courses as a system that personalizes the learning process of their users (Knox, 2016). Teachers perceive what parts of the substance they are teaching make the student biggest problems, and they can help him/her to understand these parts, and vice versa, students see what makes them the biggest problems and to what they should return.

## **4. Conclusion**

Individual education takes place only after leaving education institutions, interacting with the work environment and taking into account the demands that contemporary society and employers require. Research of Microsoft Partner in Learning Research (MPIL) is evidence of this phenomenon as it focuses on defining the relationship between 21st century's abilities and quality of work and life after school. Up to 59% of respondents argued that most of the skills necessary for their current work were obtained after school. Gallup's research was conducted



using 1 014 interviews with respondents aged 18-35. Students and workers were among the respondents. Research has shown that respondents prefer outdoor activities than classroom classes. 59% of people said that most of what they use in their present work was taught outside school [14]. It was clear from the results that the development of skills for the 21st century in the last year of study has a positive correlation with the perceived quality of work later in life. Those who have worked to acquire skills for the 21st century perceive the quality of their work twice as better as those who did not work on the skills for the 21st century.

The sooner the students will be educated and improved in their 21st century skills, the better opportunities they find on the labor market. The goal of public administration and, in particular, educational institutions is precisely to improve the quality of life for citizens while respecting the principles of sustainable development while at the same time increasing the performance and quality of public services provided. Thus, human resources are the central bearers of values, know-how, creativity, innovation, and therefore the knowledge and skills necessary and appropriate to the current requirements of the 21st century (Jankurová, Masár, Jankelová, 2017). The years of membership in the EU has taught us that European cooperation in the area of education and professional training must not focus only on reaching a certain percentage of people with university education but must lead to ensuring the sufficient quality of education and employability of graduates on the labour market (Göttlichová, Soukalová, 2014). It is also necessary to realize that in today's globalized society "one of the core virtues of global citizenship is a commitment to protect, uphold and educate the cultural diversity of the global commonwealth" (Huang, 2017). One of the features of education in the 21st century is therefore the ability to constantly learn, to respond to changes and to have an overview of 21st century skills. A true leader of 21st century is not only characterized by his personality traits and characteristics or their power position, but mainly by their knowledge and skills (Jankurová, Ljudvigová, Gubová, 2017). Due to the definition of new elements of current leadership in enterprises, also new leadership requirements need to be identified and educated (Ljudvigová, 2017).

Self-training thus becomes a tool to allow people to update their knowledge and skills and to remain competitive in the current global economy. In addition, people try to educate on their own, in the way that suits them the most, the things that matter most to them. It is natural that they want to use the conveniences of the Internet and the ever-evolving technology. Whether knowingly or unwittingly they create their own personal learning environment (PLE), which add structure to their world of learning. The most diverse group of factors that influence the development of domestic investment funds are the socio-psychological factors. Due to the complexity of investment products such as funds, investment funds, level of education and knowledge of financial markets and entities operating on it can affect the development of the size of the demand for asset management services, and consequently the size of the investment funds market (Mentel, Horváthová, 2016).

## References

- [1] Ács, Z. J. (2015). *Global Entrepreneurship, Institutions and Incentives: The Mason Years*. Northampton: Edward Elgar Publishing.
- [2] Bílý, J., Horváthová, Z. (2016). Personal security and social care: a comparison of Germany and the Czech Republic. In: *Journal of Security and Sustainability Issues*. 2016 September Volume 6 Number 1. Available at: [http://jssidoi.org/jssi/uploads/journals/Entrepreneurship\\_and\\_Sustainability\\_Issues\\_Vol6\\_No1\\_print.pdf](http://jssidoi.org/jssi/uploads/journals/Entrepreneurship_and_Sustainability_Issues_Vol6_No1_print.pdf) (2. 10. 2016). pp. 103-112.

- [3] Edquist, CH. (2013). *Systems of Innovation: Technologies, Institutions and Organizations*. London: Routledge.
- [4] Göttlichová, M., Soukalová, R. (2014). Ten Years of Membership in the EU - Quality of Education and Employability of University Graduates on the Labour Market. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 165–172.
- [5] Huang, M. (2017). Developing an Intercultural Citizenship Community: Language Identity vs. Language Education. In *Politické vedy*. 20(4), 2017. ISSN 1335 – 2741, pp. 90-112.
- [6] Jankurová, A., Ljudvigová, I., Gubová, K. (2017). Research of the nature of leadership activities. In: *Economics & Sociology*, 10(1): 135-151. doi: 10.14254/2071-789X.2017/10-1/10
- [7] Jankurová, A., Masár, D. Jankelová, N. (2017). Effective management and self-government: Current trends. In: *Czech Journal of Social Sciences, Business and Economics*. Praha: University Service Publishing, 2017. Volume 6 (2) 2017, pp. 21-31. Available at: <https://www.cjssbe.cz/volume-6-issue-3-2017/>
- [8] Karyotakis, K., Moustakis, V. (2014). Total Quality Management and Change Management in Public Organizations. In *Sinteza 2014 - Impact of the Internet on Business Activities in Serbia and Worldwide*. Belgrade: Singidunum University, 2014. pp. 38-42. doi: 10.15308.
- [9] Kay, S. L., Cohen, W. M. (2012). *Skills & Values: Criminal Procedure*. Dayton: LexisNexis.
- [10] Knox, J. (2016). *Posthumanism and the Massive Open Online Course: Contaminating the Subject of Global Education*. Londýn : Routledge.
- [11] Larkley, J. E., Maynhard, V. B. (2008). *Innovation in Education*. Hauppauge: Nova Publishers.
- [12] Ljudvigova, I. (2017). The importance of holistic managerial competence and social maturity in human crisis. In: *Polish Journal of Management Studies*. 2017, 15(1), 163-173.
- [13] Mentel, G., Horváthová, Z. (2016). Factors of efficiency of open investment funds in 1997-2015. In: *Economics and Sociology*. Available at: [http://www.economics-sociology.eu/?385.en\\_factors-of-efficiency-of-open-investment-funds-in-1997-2015](http://www.economics-sociology.eu/?385.en_factors-of-efficiency-of-open-investment-funds-in-1997-2015). Vol. 9, no. 1. 2016.
- [14] OECD, (2016). *Innovating Education and Educating for Innovation. The Power of Digital Technologies and Skills*. Paris: OECD Publishing.
- [15] Payne, C. R. (2009). *Information Technology and Constructivism in Higher Education: Progressive Learning Frameworks: Progressive Learning Frameworks*. Hershey: IGI Global.
- [16] Porter, S. (2015). *To MOOC or Not to MOOC: How Can Online Learning Help to Build the Future of Higher Education?* Oxford: Chandos Publishing.
- [17] Redmond, P., Lock, J., Danaher, P. (2015). *Educational Innovations and Contemporary Technologies: Enhancing Teaching and Learning*. New York City: Springer.

- [18] Shavinina, L. (2013). *The Routledge International Handbook of Innovation Education*. Londýn: Routledge.
- [19] Vantassel-Baska, J., Little, C. A. (2016). *Content-Based Curriculum for High-Ability Learners*. Illinois: Sourcebooks, Inc.
- [20] World Economic Forum, (2014). *The Europe 2020. Competitiveness Report. Building a More Competitive Europe*. Geneva: World Economic Forum.

## Complexity of International Project Management: the EU Case Application

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### **Abstract**

*Over the last decade, interest in project management has grown considerably. Yet, while project management experiences a boom, gloom and doom, performance often plague projects. Project performance relies on different dimensions of project management. Not only do practitioners realize that projects are “cool” yet complex to manage but they often discover that the “governing authority law” has struck again, and, thus, that projects are often over budget, over time, over and over again or worse, that projects fail to deliver on their immediate objectives or their strategic goals. The actual architecture of the project management in the EU offers a wide range of funding opportunities. However, funding is often not used effectively or it may be denied due to poor planning and implementation. Although numerous programmes and initiatives show different features, the development and implementation of projects in practice follows common EU rules. The main aim of the paper is to present the practises, especially in the EU programming period 2014–2020, which responds to international project management approach.*

**Keywords:** *EU Funds, International Project Management, Project Cycle Management, PMBOK, PMI*

**JEL Classification:** *O10, O22, O52, R58*

### **1. Introduction**

Project management success is extremely interesting topic from scientific, as well as practical point of view. Namely, different models of project management success emerged through history, indicating the level of thoughts considering management of project successful. Importance of project management also confirms the fact that the global need for skilled project managers is being raised by many institutions and organizations working within European institutional structures. Over the past half century, the European Union (EU) has been successful in securing high and rising living standards for their citizens. However, it is currently facing critical economic and social challenges as confirmed by a number of expert studies. Despite past success, the financial and economic crisis of the last five years has led several European economies and the EU itself to one of their most difficult moments in the post-World War II period – not only in the case of internal issues, but in the case of international relations too. The EU is going through one of the most difficult periods since its establishment and management, with multiple challenges facing the EU, countries and regions policy-makers, especially in the link with economic crisis. Recent years have seen a myriad of economic and social difficulties, i.e. stagnating economic growth, rising unemployment leading to social tensions, continuing financial troubles and sovereign debt crises in several European countries, exacerbated by the fact that the future outlook remains uncertain.

The EU is a heterogeneous unit with significant disparities between its Member States and mainly among their regions in many areas of the modern economy. The support of cohesion and balanced regional development together with increasing level of EU national and regional competitiveness belong to the temporary EU's key development objectives. The process of European integration is thus guided by striving for two different objectives: to foster economic competitiveness and to reduce national/regional differences. Nowadays enlarged EU present area with unbalanced territorial allocation of economic activities resulting in different living standard, what has a negative effect on balanced development across the whole EU, level of economic, social and territorial disparities and on the endowment for EU competitiveness (Staničková, 2014, 2015). Close affinity with spatial planning policy and developmental spatial perspective in the EU has the EU Cohesion Policy that is mostly known as discrete policy with a set of specific instruments or Funds purposing to reduce disparities (Bachtler, Mendez and Wislade, 2013). Cohesion Policy has an important role in enhancing of regional competitiveness and prosperity. From the long-term perspectives, regional competitiveness requires paying attention not only to economic but also to social and environmental factors, in recent years especially to territorial characteristics of areas – cohesion and competitiveness are thus partly complementary EU goals (Molle, 2007). In the EU, emerging and re-emerging differentiating dimensions are combined; these dimensions are associated with the EU enlargement on the one hand and with the recent crisis impact of the other hand. This leads not only to transformation of economic stratification of society, but also to uneven manifestations and impacts of economic activities in European area. As a result of spatially selective effects of economic processes is then the newly forming spatial differentiation of the EU, which should be solved and minimize by the financing activities from the European Structural and Investments Funds (ESIF) through implementation of projects based on joint project management rules and procedures. Context above just confirms common need for discipline which is project management in EU surroundings, as stated Melecký (2016).

## **2. International Project Management**

Project management (PM) has been developed over the years, and nowadays PM is identified as the primary success factor for wide range of activities and economic entities. The global need for project management opens up a variety of research, grant and academic opportunities. Graduates with PM degrees or skills enter a job market that has already identified candidates with their skill-set as its number one hiring priority. This has led to an inexorable shift away from traditional management models toward a new paradigm of project management. It has also resulted in a dramatic increase in the need for skilled project managers.

Project management is planning, organization, monitoring and control of all aspects of project, with motivation of all included to achieve project goals on safe manner, within agreed schedule, budget and performance criteria. It can be seen from the definition of project management, that it is focused on project performance, regarding short-term dimensions of project success – adherence to criteria of time, cost and quality. The “iron triangle” model itself was the very first model of project management success, which has later proven to be only a part of overall project success. From this point of view, it is clear to see how it is possible to have a successful project with unsuccessful project management, and vice versa. Namely, project can be successful despite unsuccessful project management because it has achieved higher and long-term goals. In the moment when management of project stops, short-term orientation can be unsuccessful, but long-term outcome can be successful, because wider set of goals are satisfied, instead of narrow subset which project management consists of.

Besides the “iron triangle”, and taking into account considerations of project management success, it is possible to find many different approaches. Project manager is not responsible only for time, cost and quality management, but also integration, scope, human resource, communication, risk and procurement management, so he or she is the most responsible person for project success. With this in mind, it is surely possible to broaden “iron triangle” model on models that anticipate management of stakeholders’ satisfaction, benefits to organization that owns the project and long-term impacts on project environment.

How to measure if project management is successful? Project management success can be evaluated through already mentioned criteria of time, cost, quality, scope, resource and activity, but also through models of measuring success like Project Management Performance Assessment (PMPA) (Bryde, 2003) or maturity models of management within organization like Project Excellence Model (Westerveld, 2003). It is hard to answer the question of project management success evaluation precisely, because project management creates both tangible and intangible benefits. As stated earlier, it may be possible for a right project to succeed without successful project management, but successful project management can boost up its success. There is a significant positive relationship between project management practices and project success. Project management success is one of the elements of project success, because the latter is hardly achievable without it, as stated Radujkovića and Sjekavicab (2017).

Project management success is extremely interesting topic from scientific, as well as practical point of view. Namely, different models of project management success emerged through history, indicating the level of thoughts considering management of project successful, also with respect to project complexity. Understanding complexity is of significance importance for project managers because of the differences associated with decision making and goal attainment that appear to be related to complex projects. As projects have become more and more complex there has been an increasing concern about the concept of project complexity as it influences upon the project management process. The importance of complexity to the project management process is widely acknowledged for several reasons. Complexity affects the modelling, evaluation, and control of projects and the objectives of time, cost, quality and safety. Complexity can also affect the selection of an appropriate project organization form and the project management arrangement including the expertise and experience requirements of project managers. The importance of complexity to the project management process is widely acknowledged for several reasons: (i) it helps determine planning, coordination and control requirements; (ii) it hinders the clear identification of goals and objectives of major projects; (iii) it can affect the selection of an appropriate project organization form and experience requirements of management personnel; (iv) it can be used as a criteria in the selection of a suitable project management arrangement; (v) it can affect different project outcomes (time, cost, quality, safety, etc.), as mentioned San Cristóbal (2017).

Over the last decade, interest in project management has grown considerably (Söderlund, 2011). Indeed, by some accounts, 24% of the world GDP (\$19 trillion) is spent through projects every year (World Bank, 2015) and nearly 16 million new project management jobs are expected to be created globally by 2020 (PMI, 2013). Yet, while project management experiences a boom, gloom and doom performance often plague projects (Morris, 2013; Shenhar and Dvir, 2007). Not only do practitioners realize that projects are “cool” yet complex to manage (Grabher, 2002) but they often discover that the “iron law” has struck again, and, thus, that projects are often over budget, over time, over and over again (Flyvbjerg, 2014) or worse, that projects fail to deliver on their immediate objectives or their strategic goals (Matta and Ashkenas, 2003; Shenhar and Dvir, 2007).

Over the past years, various standards have emerged and have helped to increase the degree of professionalism of PM. Professional associations the world over are introducing ever more PM standards and certification processes. The well-known institution related to PM are Project Management Institute (PMI) and International Project Management Association (IPMA) which create own project standards. The large majority of providers and programmes in North America seem to focus on the Project Management Body of Knowledge (PMBOK) Guide (PMI, 2017) based transfer of ‘know what’ and ‘know how’ aimed at improving the problem-solving skills of junior level project management professionals. IPMA that represents members of various national organizations primarily in Europe, Asia, and Africa ‘has developed its own standards and certification programme which is comprised of a central framework and quality assurance process plus national programmes developed by association members’ (IPMA, 2006). Yet the trend towards professionalism and the focus on standardization come into question as the behavioural and personal competencies of project managers outside of PM standards appear to be more relevant for their workplace performance than the tools and techniques emphasized in the standards. Furthermore, failures to plan accurately and control within “acceptable” limits are commonplace and projects fail at an astonishing rate in spite of the increasing interest in PM and PM implementation over the last decades (Flyvbjerg, Bruzelius and Rothengatter, 2003). At the same time, the role of complexity, chaos, and uncertainty play within development projects and project environments is gaining recognition in both research and practice.

Projects which transcend national and cultural borders, as well as time zones are routine in the global marketplace – they are synergistic and facilitate the development of new markets. The heightened complexity of these projects places high demands on the “soft” and “hard” skills needed for the project steering process. Complications and misunderstandings often arise, not because of different languages being used, but because of cultural differences. These can include differing connotations within the language, culturally based differences of behaviour, different expectations of leadership behaviour, and of personal proximity and boundaries in the work atmosphere, differing ways of dealing with time, or the extent to which information is explicitly or implicitly transmitted.

In addition, the geographical distance places certain demands on the virtual communication structures of the project teams. The entire project team, but especially the project management faces the challenge of effective process management of the communication process, and content management of content and tasks. How are common visions and objectives defined? Which modes of communication are appropriate? How can new virtual team-members be integrated and trust developed? Competent international project management deals with these issues proactively, utilizing the knowledge of intercultural work procedures and project steering skills. What are the issues? Cultural differences may cause complications and misunderstandings which are magnified by the virtual situation.

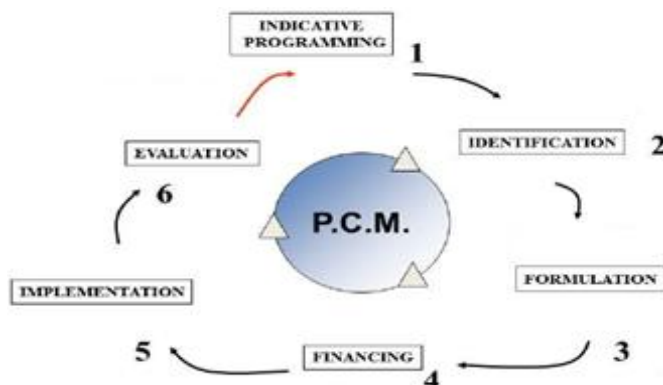
International projects involve immense capital investment. The expense factor makes it even more important to bring these projects to a successful conclusion. Carefully planned competency development and project monitoring will minimize wasted energy caused by avoidable obstacles and the efforts to achieve the project goal will be enhanced by increased consistency, motivation, self-assurance, and adherence to deadlines. Taken together, these advantages guarantee project success!

### 3. Project and Grant Management Applied in the EU

The EU Member States are founded on the principles of solidarity, democracy, respect for human rights, fundamental freedoms and the rule of law. Among these fundamental freedoms is also the right of citizens to participate actively in society, what is a significant component of the EU and as such constitute an increasingly important channel for EU investments. However, it can be extremely challenging for individuals, companies and also public sector which are trying to understand how investment decisions are made within EU institutions and how to successfully apply for EU funding realized in the frame of the EU Cohesion policy. The EU distributes its internal (and also external) funding in a number of ways: through individual projects and grant scheme, via a sector approach or by budget support to recipient governments. The project approach is particularly used to support initiatives outside the public sector, such as through subjects of civil society and the private sectors. Thus, it is essential for all entities to understand the concept of ‘the project’ and to have the capacity to design and implement projects, and especially to manage them strategically (Staničková, 2016).

Also the EU developed its own approach to PM and implemented projects supported from EU funds. The current programming period 2014–2020 holds lots of opportunities to fund innovative ideas and projects. The architecture of European funds and direct grants continues to offer a wide range of funding opportunities in the EU Member States. However, funding is often not used effectively or it may be denied due to poor planning. Although numerous programmes and initiatives have different features, the development and implementation of projects in practice follow common rules. But the initial question is what the definition of project is? There are a variety of definitions of what is a project, but useful starting point is the definition used in the EU. In 1992 the European Commission (EC) adopted project approach called Project Cycle Management (PCM) as the primary set of project design and management tools based on the Logical Framework Approach (LFA) for EU funded projects. PCM divides general project cycle to six basic design phases displayed in Figure 1. The first PCM manual has been produced in 1993 and subsequently has been updated. Based on the EU’s own PCM Guidelines (EC, 2004), project is defined as ‘series of activities aimed at bringing about clearly specified objectives within a defined time-period and with a defined budget. A project should also have clearly identified stakeholders, including the primary target group and the final beneficiaries; clearly defined coordination, management and financing arrangements; a monitoring and evaluation system to support performance management; and an appropriate level of financial and economic analysis indicating the project’s benefits will exceed its costs’.

**Figure 1: EU Project Cycle Management**



Source: Melecký, 2016



Project Cycle Management (PCM) is an approach that allows to manage many different projects and improve the quality of your projects over time. PCM uses the idea of a continuous learning cycle and incorporates logical framework analysis to guarantee that the beneficiaries are involved in the project's design. A core tool within Project Cycle Management is the Logical Framework Approach (LFA). Where LFA is all about getting the point of view of the stakeholders to define the project, PCM focuses more on the project manager. It is not surprising that this method became popular in large organisations and donor institutions. PCM is a good method of managing multiple projects at once, seeing to it that they comply with the overall strategy of the organisation and respond to the right procedures and rules. PCM also forces you to reflect on what you will do when things don't go as planned, and allows you to learn from these experiences. It acknowledges that the environment you work in is constantly evolving, which means that you must be flexible and capable to adapt (European Commission, 2018).

PCM is also an approach that favours standardised procedures and models, which lead to rigidity and to (huge) administrative overhead. PCM is a simple model that facilitates project management, but this very simplicity also pushes people to oversimplify complex development situations. As with LFA – which it incorporates – the rigid cause-and-effect logic forces people to leave out important parts. On the other hand, PCM has been used to manage enormous and complex programmes that combine actions in many countries and regions all over the world, over long periods of time. In these cases, the overall programme regroups specific actions and sub-actions in different places at different moments. To manage such complex programmes, you need a project management approach that goes further than that of a simple individual project, what is the case of the EU and supported projects from the EU funds.

The programming period 2014–2020 brings a number of challenges for the EU, namely fostering job-rich recovery from the economic crisis, but also addressing environmental challenges and climate change, tackling persistent educational gaps and fighting poverty and social exclusion. These challenges affect or threaten millions of our fellow European citizens and require the establishment of new instruments according to their aspirations. This is why the new framework strongly focuses on results. It includes new mechanisms, which should lay down the conditions for making a difference: a sound strategic approach through Partnership Agreements and programmes, thematic concentration, the performance framework, ex ante conditionality, a closer link to European economic governance, increased opportunities for the use of financial instruments, support to institutional capacity, minimum shares for European Social Fund contribution and a Youth Employment Initiative specifically set out to combat youth unemployment.

It has been long known that the most effective educational approach is one founded on a combination of school (academic) instruction and the application of academic concepts in actual practice. Courses of EU Project and Grant Management A and B support both sides of this equation, providing invaluable professional and academic support to students. Students' professional development begins with the receipt of the 6th edition of the PMBOK Guide, the global resource on PM used to shape both professional practice and educational curricula around the world in all phases of PCM. PMBOK Guide is globally accepted and it has 'become the de facto global standard for project management' (PMI, 2017).

Moreover, it's necessary to take into account the fact, that as organizations become increasingly complex, understanding complexity has become more and more important in organizational theory. The interrelationships between internal and external environments – from the culture and products through the competition and customers – force economic entities to make decisions based on multiple unknown variables.

## 4. Conclusion

Project management is inevitable in today's world – a place of continuous improvement through different types of various projects. Project management is not only necessity for that improvement but also one field that seeks for improvement itself, through influence on different PM success factors and also PM practices worldwide. The actual architecture for the EU funds and grants offers a wide range of funding opportunities. However, funding is often not used effectively or it may be denied due to poor planning and implementation. Although numerous programmes and initiatives show different features, the development and implementation of projects in practice follows common EU rules. The main aim of the paper is to present the project management learning approach which responds to EU programming period 2014–2020 and thus it helps the students and junior project managers acquire professional project management skills under EU rules. From the reviewed literature, it has been suggested that a properly designed project management curriculum is essential and will not only result in well-prepared future project managers but a competent workforce. These facts are important because of improvements in the Czech project management culture; the drawing of EU funds; the correctness of EU projects implementation and the compliance with EU requirements. The increasing unpredictability and complexity of unforeseen consequences of actions means that new methods of managing, planning and executing strategy are needed.

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## References

- [1] Bachtler, J., Mendez, C. and Wishlade, F. (2013). *EU Cohesion Policy and European Integration. The Dynamics of EU Budget and Regional Policy Reform*. Farnham: Ashgate.
- [2] Bryde, D.J. (2003). Methods for managing different perspectives of project success. *British Journal of Management*, vol. 16, iss. 2, pp. 119-131.
- [3] European Commission. (2004) *Project Cycle Management Guidelines*, Brussels: European Commission.
- [4] European Commission. (2018). *Project and programme cycle management*. [online]. [cit. 2018-03-29]. Available at: <https://ec.europa.eu/europeaid/node/1579>
- [5] Flyvbjerg, B. (2014). What you should know about megaprojects and why: an overview. *Project Management Journal*, vol. 45, iss. 2, pp. 6-19.
- [6] Flyvbjerg B, Bruzelius N, and Rothengatter W. (2003). *Megaprojects and risk*. Cambridge: Cambridge University Press.
- [7] Grabher, G. (2002). Cool projects, boring institutions: temporary collaboration in social context. *Regional Studies*, vol. 36, iss. 3, pp. 205-214.
- [8] International Project Management Association. (2006). *The IPMA Competence Baseline for Project Management*. Amsterdam: IPMA.
- [9] Matta, N.F. and Ashkenas, R.N. (2003). Why good projects fail anyway. *Harvard Business Review*, vol. 81, iss. 9, pp. 109-114.

- [10] Melecký, L. (2016). Changing of EU Project and Grant Management Approach in Response to New Trends of Programming Period 2014–2020. In *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB-Technical University of Ostrava, pp. 605-614.
- [11] Molle, W. (2007). *European Cohesion Policy*. London: Routledge.
- [12] Morris, P.W.G. (2013). *Reconstructing Project Management*. Chichester: Wiley-Blackwell.
- [13] Project Management Institute. (2013). *PMI's Pulse of the Profession. The High Cost of Low Performance*. Pennsylvania: PMI.
- [14] Project Management Institute. (2017). *A Guide to the Project Management Body of Knowledge*. Pennsylvania: PMI.
- [15] Radujkovića, M. and Sjekavicab, M. (2017). Project Management Success Factors. *Procedia Engineering*, vol. 196, pp. 607-615.
- [16] San Cristóbal, J.R. (2017). *Complexity in Project Management*. *Procedia Computer Science*, vol. 121, pp. 762-766.
- [17] Shenhar, A. and Dvir, D. (2007). *Reinventing Project Management*. Cambridge: Harvard Business School Press.
- [18] Söderlund, J. (2011). Pluralism in Project Management: navigating the crossroads of specialization and fragmentation. *International Journal of Management Review*, vol. 13, iss. 2, pp. 153-176.
- [19] Staničková, M. (2014). Measuring the efficiency of EU13 NUTS 2 regions based on RCI approach. In *17th International Colloquium on Regional Sciences*. Brno: Masaryk University, pp. 76-84.
- [20] Staničková, M. (2015). Classifying The EU Competitiveness Factors using Multivariate Statistical Methods. In *Procedia Economics and Finance*, vol. 23, pp. 313-320.
- [21] Staničková, M. (2016). Practical Aspects of EU Project and Grant Management in Programming Period 2014-2020. In *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB-Technical University of Ostrava, pp. 898-907.
- [22] Westerveld, E. (2003). The Project Excellence Model®: linking success criteria and critical success factors. *International Journal of Project Management*, vol. 21, iss. 6, pp. 411-418.
- [23] World Bank. (2015). *World Bank indicators*. [online]. [cit. 2018-03-29]. Available at: <http://data.worldbank.org/indicator/NE.GDI.TOTL.ZS>.

## Complexity of the Project Cycle Management and Logical Framework Approach: Challenges or Standards in the EU Case?

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### **Abstract**

*Project management for its part, has grown from the narrow execution-oriented management of a single project where the focus is doing the project right, i.e., meeting time, cost, and quality, to a broader, more strategic, and complex management of projects where the focus is doing the right things, i.e., delivering benefits for stakeholders and end-users. Understanding complexity is of significance importance for project managers (in public in private sphere) due to the differences associated with decision-making and goal attainment that appear to be related to complex projects. As projects have become more and more complex, there has been an increasing concern about the concept of project complexity as it influences upon the project management process. The importance of complexity to the project management process is widely acknowledged for several reasons, and especially in the European Union sphere due to its heterogeneity – number of member states, number of policies and topics to be solved by projects. Interestingly, the project management field is more and more looking to address the EU big questions, but the question is if the EU apply, or is able to adapt the best-practice of international projects approach for managing its projects?*

**Keywords:** Complexity, EU, ESIF, LFA, PCM, PMBOK, PMI, Project Management

**JEL Classification:** O10, O22, O52, R58

### **1. Introduction**

The European Union (EU) is founded on the principles of liberty, democracy, respect for human rights and fundamental freedoms, and the rule of law. Among these fundamental freedoms is the right of citizens to form associations that pursue a common purpose and which respect the above-mentioned principles. Citizens also have a right to participate actively in society, and to be involved in political parties and trade unions. Although the EU is one of the most developed parts of the world with high living standards, there exist significant and huge economic, social and territorial disparities having a negative impact on the balanced development across Member States and their regions, and thus weaken EU's performance in a global context. European integration process is guided by striving for two different objectives: to foster economic competitiveness and to reduce differences (Molle, 2007). The support of cohesion and balanced development together with increasing level of EU competitiveness thus belong to the temporary EU's key development objectives (Melecký, 2015). The face of the EU undoubtedly changed with the latest enlargements of 2004, 2007 and 2013. The accession of new members not only entails the integration of countries with generally lower Gross Domestic Product (GDP) and higher unemployment levels, but also causes an increase in the Union's diversity in terms of e.g. social structures, institutional profiles, urban-rural relationships and environmental challenges and other changes, threats and challenges

(Šotkovský, 2016). Embracing this diversity however implies a need to adapt analytical approaches to social, economic and environmental phenomena correspondingly and testify the level of converge trends between group of old members and new, resp. relatively new members (Dvoroková, 2016). In this field is thus important to evaluate efficiency and effectiveness of using financial sources in the EU Members States to identify utility of these sources for national and regional development (Halásková and Halásková, 2014). Nowadays, the EU is going through one of the most difficult periods since its establishment, with multiple challenges facing the region's policy-makers. Recent years have seen a myriad of economic and social difficulties, i.e. stagnating economic growth, rising unemployment leading to social tensions, continuing financial troubles and sovereign debt crises in several European countries, exacerbated by the fact that the future outlook remains uncertain. There is widespread agreement that the root causes of this prolonged crisis lie in the lack of competitiveness of many countries (WEF, 2017). Territorial potentials of European regions and their diversity are thus becoming increasingly important for the development of the European economy, especially now in times of globalisation processes in world economy.

Interest in Project Management (PM) is growing significantly. And it's not just in business. The global need for skilled PM is being raised by such organizations as the International Monetary Fund, the World Bank and the EU. Nowadays, PM has developed into many activities in order to plan, co-ordinate and control the complex and diverse activities of wide range of projects. What is the reason for so high level of popularity of project management within the EU and co-financed of development activities from the EU funds?

The current programming period 2014-2020 holds lots of opportunities to fund innovative ideas and projects. The architecture of the EU funds and direct grants continues to offer a wide range of funding opportunities in the EU Member States, and especially NUTS 2 regions, i.e. in this field, the EU main focus is in investing in regions through the reformed EU Cohesion Policy 2014-2020. The adoption of the Partnership Agreements and programmes of the European Structural and Investment Funds (ESIF) constitutes a major step forward in the Union's support to the strategy for smart, sustainable and inclusive growth under the Europe 2020 strategy. By making available more than EUR 450 billion, the new programmes will enable the EU Member States and NUTS 2 regions to fully exploit their potential to achieve this threefold objective, while ensuring sound contribution to the Fund-specific purposes of the ESIFs; in particular, the objectives of economic, social and territorial cohesion, sustainable development of rural and maritime areas and sustainable management of natural resources.

Territorial potentials of European regions and their diversity are thus becoming increasingly important for the development of the European economy, especially now in times of globalisation processes in world economy. The EU, its regions and larger territories are increasingly affected by developments at the global level. New emerging challenges impact on territorial development and require policy responses. Territorial disparities on the other hand challenge the economic, social and territorial cohesion within the EU (Poledníková, 2014). Contributions from cities, regions and larger territories are important for Europe's position in the world and thus for the achievement of the aims set out in European growth strategies aiming on competitiveness, i.e. the Lisbon strategy for period 2000-2010 and the Strategy Europe 2020 for period 2010-2020. These strategies were and still are aimed to make Europe the world's leading knowledge-economy, based on the principle of sustainable development. But actions are needed at all levels of government – European, national and regional/local levels – if these ambitions are to be realised (Staničková, 2016).

However, funding is often not used as effectively as possible or it may be denied due to lack of knowledge or poor planning. Although the numerous programmes and initiatives have different features, the development and implementation of projects in practice follow common rules. But what is a project? According to definition, the Project Management Institute (PMI) defines project as follows: "A temporary endeavour undertaken to create a unique product, service, or result" (PMI, 2013). International Project Management Association (IPMA), the other well-known institution in the field of PM, defines project in following way: "A project is a time and cost constrained operation to realize a set of defined deliverables (the scope to fulfil the project's objectives) up to quality standards and requirements" (IPMA, 2006). European Commission defines project as follows: "A project is a series of activities aimed at bringing about clearly specified objectives within a defined time-period and with a defined budget" (EC, 2004). All definitions of project share one common characteristic - the projection of ideas and activities into new endeavours. The purpose of PM is to foresee as many dangers and problems as possible; and to plan, organise and control activities according to project lifecycle so that the project is completed as successfully as possible in spite of all the risks.

To achieve this goal and success of the whole project, the essential condition must be fulfilled - professional, relevant and effective PM. Is this PM easy to achieve and what knowledge and experience must have a responsible person? What are the basic knowledge and skills in PM needed by today's graduates to enter today's workplace as project managers? It has been long argued by some professionals that management is best learnt "on the job". Others on the other hand would say that a certain amount of management could be usefully and beneficially given to people as part of a learning package. One of the main arguments for this meaning is that if inexperienced personnel are encouraged to "learn on the job" they will not only learn good practice but also develop bad practice without being aware of its deficiencies (Melecký, 2016).

## **2. Project Cycle Management**

Project Cycle Management (PCM) is an approach that allows you to manage many different projects and improve the quality of your projects over time. PCM uses the idea of a continuous learning cycle and incorporates logical framework analysis to guarantee that the beneficiaries are involved in the project's design. However, PCM's built-in flexibility is often threatened by the way its tools and models are used in a rigid way by donors and strong non-government organization (NGO) partners. PCM is an approach to manage multiple projects or programmes and to improve the quality of projects by learning from one project and applying the lessons in the following ones. The approach was introduced by the World Bank in the 1980, and spread throughout the development world in the 90s, when it was picked up by the European Commission. Following an evaluation on Aid Efficiency, the European Commission introduced PCM as its main approach to manage and evaluate development project proposals.

Since then, other donor agencies and NGOs picked it up, although not always voluntarily. The fact that donor agencies actively pushed PCM and models and tools related to PCM led to resistance and often gave this approach a bad rep. One of the main tools of PCM, apart from the overall cycle, is the logical framework. With its emphasis on participation from both partners and beneficiaries, PCM incorporated the Logical Framework Approach (LFA) and added two main elements (EC, 2004):

- the link between the long term policies or the strategic framework of the organisation and their execution in the form of projects (or programmes);
- learning from experiences: PCM puts a heavy emphasis on monitoring and evaluation. The main idea behind the cycle is that the quality of projects gradually improves as lessons are passed on from one project to the next. Also, within a single project there is flexibility and learning, as continuous monitoring allows the people who manage the project to adapt the activities and planning to the (changing) situation in the field. At least, that is the theory.

Another benefit of PCM, both from the management point of view and the quality improvement point of view, is that it presents a standardised approach with standardised tools. However, this is also the main reason why PCM meets with a lot of resistance. As a project management approach, PCM is mainly interesting for donor agencies and large NGOs. The problem is that these large organisations tend to force their partners to use the procedures and tools in a very rigid way. This goes up to the point that the emphasis shifts from flexibility in the field and learning between projects, towards respecting contracts, forms, procedures, administrative rules, budget restrictions, and so on. PCM is used to manage contracts, control projects and see to it that laws, regulations and budgetary restrictions are respected. Often, this leads to a situation where both beneficiaries and the NGO or NGOs that manage the projects are bound by hands and feet to the contract, the log frame, the budget and the planning. This is a far cry from the original notion of flexibility and learning.

A core tool within Project Cycle Management is the Logical Framework Approach. LFA supports the different stages of PCM and should provide an information base for completing the required PCM documents. When understood and intelligently applied, LFA is a very effective analytical and managerial tool. Where LFA is all about getting the point of view of the stakeholders to define the project, PCM focuses more on the project manager. It is not surprising that this method became popular in large organisations and donor institutions. PCM is a good method of managing multiple projects at once, seeing to it that they comply with the overall strategy of the organisation and respond to the right procedures and rules.

For smaller organisations with fewer projects, PCM may seem more of a burden than a benefit and not worth the overhead. However, PCM does show us that there is more to development than just doing activities with your beneficiaries. You do need an idea where you are going in the long run, and your projects should all originate from a common sense of direction. Otherwise you'll just end up with a whole bunch of different activities that are difficult to manage (and fund). There are plenty of organisations that ended up in that situation.

PCM also forces you to reflect on what you will do when things don't go as planned, and allows you to learn from these experiences. It acknowledges that the environment you work in is constantly evolving, which means that you must be flexible and capable to adapt.

Learning from your successes and failures is equally important. Just trying to do well is not good enough. Your beneficiaries have a right to get quality assistance and to get the best you can deliver. International development and the fight against poverty, disease, and inequality are complicated domains that need more than well-meant amateurism (although professionals can also learn from the enthusiasm and the good spirit of small volunteer actions).

The idea of the learning cycle in PCM is a solid one. It also teaches us to check what we do and react, in other words to be flexible in the execution of our projects. However, we all know that theory and practice are sometimes far apart. PCM is also an approach that favours standardised procedures and models, which lead to rigidity and to (huge) administrative overhead. PCM is a simple model that facilitates project management, but this very simplicity

also pushes people to oversimplify complex development situations. As with LFA – which it incorporates – the rigid cause-and-effect logic forces people to leave out important parts. Especially when combined with rules such as ‘a maximum of one specific objective / project purpose per project is allowed’.

On the other hand, PCM has been used to manage enormous and complex programmes that combine actions in many countries and regions all over the world, over long periods of time. In these cases, the overall programme regroups specific actions and sub-actions in different places at different moments. To manage such complex programmes, you need a project management approach that goes further than that of a simple individual project.

### 3. Project Management for the EU Funded Projects

In 1992 the European Commission adopted PCM as its primary set of project design and management tools (based on Logical Framework Approach), and a first PCM manual was produced in 1993. The manual was subsequently updated in 2001, shortly after the publication of the EC’s most recent Development Policy document (April 2000). A decision was made in early 2003 to update PCM manual again (now referred to as PCM ‘Guidelines’) as a result of:

- experience gained through implementing the ‘new’ development policy;
- issues raised by the ongoing international debate on aid effectiveness;
- feedback from participants attending PCM training.

PCM is a complex and creative process – as much art as science – involving the negotiation of decisions acceptable to key stakeholder groups. Teamwork, negotiation and communication skills are thus central to effective PCM, as is an appreciation of the political context within which decisions are being made. PCM provides an overall analytical and decision making framework, which must nevertheless be complemented by the application of other specific ‘technical’ and ‘process’ tools. Thus, the Guidelines should also be used in conjunction with other important European Commission reference documents relevant to specific sectors (e.g. Transport, health, education), to specific cross-cutting issues (e.g. good governance and human rights, gender, environment) and to specific assessment tools (e.g. Economic and Financial Analysis).

In the EU practice and project and grant management, what is the relationship between projects, programmes and policies? A well-formulated project should derive from an appropriate balance between the European Commission’s development policy priorities and the partner’s development priorities. Within the scope of these policy priorities, the executive arms of government or non-governmental agencies formulate the broad areas of work required to implement policy decisions. These broad areas of work are often called programmes, which, like projects, may vary significantly in scope and scale. The definition of what a programme is depends essentially on how the responsible authority, resp. authorities choose to define it.

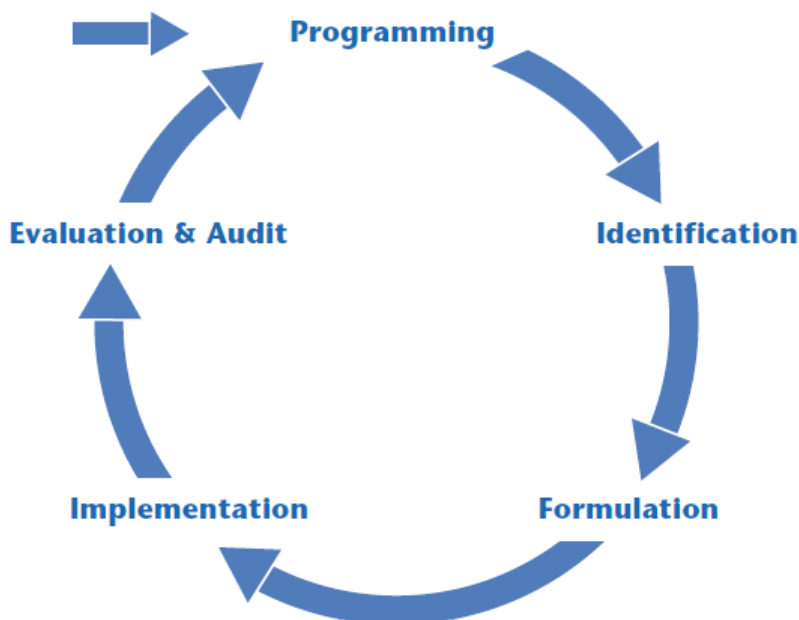
Here is required to distinguish between project and programme cycle management. Project and programme cycle management guidance relates to the approaches governing the programming, design, implementation and evaluation of projects and programmes funded by EU external assistance. Project and programme cycle management guidance proceeds on the fundamental principles governing the cycle of operations characterized by a five stage cycle (European Commission, 2018):



- programming, where the priorities of EU assistance to a partner country, region or decentralized actors are defined;
- identification, where the options for an intervention are considered;
- formulation or design, where the action is developed in detail on the basis of which funding is approved;
- implementation, where actions are carried out and monitored;
- evaluation where the achievements are assessed in depth and lessons learned.

The cycle of operations for managing the European Commission's external assistance projects has five phases, as shown in Figure 1.

**Figure 1: The Cycle of Operations**



Source: European Commission, 2004, p. 16

This cycle highlights three main principles:

1. decision making criteria and procedures are defined at each phase (including key information requirements and quality assessment criteria);
2. the phases in the cycle are progressive – each phase should be completed for the next to be tackled with success;
3. new programming and project identification draws on the results of monitoring and evaluation as part of a structured process of feedback and institutional learning.

In practice, the duration and importance of each phase of the cycle will vary for different projects, depending on their scale and scope and on the specific operating modalities under which they are set up. For example, a large and complex engineering project may take many years to pass from the identification through to the implementation phase, whereas a project to provide emergency assistance in a post-conflict context may only take a few weeks or months to commence operations on the ground. Nevertheless, ensuring that adequate time and resources are committed to project identification and formulation is critical to supporting the design and effective implementation of relevant and feasible projects.

## 4. Conclusion

Practitioners maintain that Project Management can be learnt “on the job” after formal training has been completed. This debate has continued for many years but now the evidence of many new PM programmes in a variety of disciplined areas suggest that it is now accepted that PM is an acceptable and recognised academic study.

Project Cycle Management (PCM) is an approach that allows to manage many different projects and improve the quality of your projects over time. PCM uses the idea of a continuous learning cycle and incorporates logical framework analysis to guarantee that the beneficiaries are involved in the project's design. A core tool within Project Cycle Management is the Logical Framework Approach (LFA). Where LFA is all about getting the point of view of the stakeholders to define the project, PCM focuses more on the project manager. It is not surprising that this method became popular in large organisations and donor institutions. PCM is a good method of managing multiple projects at once, seeing to it that they comply with the overall strategy of the organisation and respond to the right procedures and rules. PCM also forces you to reflect on what you will do when things don't go as planned, and allows you to learn from these experiences. It acknowledges that the environment you work in is constantly evolving, which means that you must be flexible and capable to adapt.

PCM is also an approach that favours standardised procedures and models, which lead to rigidity and to (huge) administrative overhead. PCM is a simple model that facilitates project management, but this very simplicity also pushes people to oversimplify complex development situations. As with LFA – which it incorporates – the rigid cause-and-effect logic forces people to leave out important parts. On the other hand, PCM has been used to manage enormous and complex programmes that combine actions in many countries and regions all over the world, over long periods of time. In these cases, the overall programme regroups specific actions and sub-actions in different places at different moments. To manage such complex programmes, you need a project management approach that goes further than that of a simple individual project, what is the case of the EU and supported projects from the EU funds.

The EU programming period 2014-2020 holds lots of opportunities to fund innovative ideas and projects. The architecture of European Structural and Investment Funds (ESIF) and direct grants continues to offer a wide range of funding opportunities in the EU Member States. However, funding is often not used effectively or it may be denied due to poor planning. Although numerous programmes and initiatives have different features, the development and implementation of projects in practice follow common rules. For the EU funded projects, the European Commission requires the use of PCM. PCM is divided into different project phases from programming, through formulation to evaluation and auditing. As a project manager you have to be familiar with all different phases of PCM to successfully implement and manage and the EU funded project and to fulfil the requirements of the European Commission.

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### **References**

- [1] Dvoroková, K. (2016). Method Matters: Essays on the Selected Econometric Techniques for Modelling of Economic Convergence: Essays on the Selected Econometric Techniques for Modelling of Economic Convergence. In *Proceedings of the 3rd International Conference on European Integration 2016*, pp. 161-172.

- [2] European Commission. (2018). *Project and programme cycle management*. [online]. [cit. 2018-03-29]. Available at: <https://ec.europa.eu/europeaid/node/1579>
- [3] European Commission. (2004) *Project Cycle Management Guidelines*, Brussels: European Commission.
- [4] Halásková, M. and Halásková, R. (2014). Assessment of Public Expenditures in Selected Areas of Public Services in EU Countries. In *Proceedings of the 14th International Conference on Finance and Banking*. Karviná: Silesian University of Business Administration, pp. 88-98.
- [5] International Project Management Association. (2006). *The IPMA Competence Baseline for Project Management*. Amsterdam: IPMA.
- [6] Melecký, L. (2016). Changing of EU Project and Grant Management Approach in Response to New Trends of Programming Period 2014–2020. In *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB-Technical University of Ostrava, pp. 605-614.
- [7] Melecký, L. (2015). Assessment of Socioeconomic Development of Visegrad Four NUTS 2 Regions Using Composite Indices. In *12th International Conference Economic Policy in the European Union Member Countries*. Karviná: Silesian University, pp. 561-571.
- [8] Molle, W. (2007). *European Cohesion Policy*. London: Routledge.
- [9] Poledníková, E. (2014). Evaluation of Czech Regional Development in the Context of the EU Cohesion. In *Proceedings of the 2nd International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, pp. 572-580.
- [10] Project Management Institute. (2013). *A Guide to the Project Management Body of Knowledge*. Pennsylvania: PMI.
- [11] Staničková, M. (2016). Practical Aspects of EU Project and Grant Management in Programming Period 2014-2020. In *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB-Technical University of Ostrava, pp. 898-907.
- [12] Šotkovský I. (2016). Regional Disparities of the Migration Behaviour in the European Union. In *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 987-995.
- [13] WEF. (2017). *The Global Competitiveness Report 2017-2018*. Geneva: WEF.

## **Circular Economy and Reverse Logistics – Elements of European Integration System**

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### **Abstract**

*The concept of circular economy is earning recognition in theoretical research. The closed-loop economy is the fundamental concept for zero waste society, elimination of wastage of resources and reuse of products. Circular economy sets the framework for reverse flows, the basis of reverse logistics. Reverse logistics is responsible for the flow of products, components and materials from where they were used back to where they were produced in order to recover some of their initial value or to find the most appropriate use for them. The European integration has stimulated the correct behaviour in the Member States influencing the circular processes. The purpose of this article is to evaluate the directions of changes in the level of the circular material use rate, which is the main measurement of the degree of secondary materials in the economy in relation to the overall material use, and to classify the EU members through comparative analysis methods using a set of variables describing the circular processes.*

**Keywords:** *circular economy, circular material use rate, European integration, European Union environmental regulations, reverse logistics, zero waste society*

**JEL Classification:** *C10, F61, F64, M21*

### **1. Introduction**

Growth in manufacturing increases the pollution of the environment. Major culprits here, apart from waste itself, are all kinds of air, water and soil pollutants. A polluted environment means worse quality of life, which is why state governments initiate activities towards the reduction of negative environmental impacts of the economy.

Pro-environmental activities are also realized within the European Union. Waste generated by the member countries is not just a major challenge. It opens possibilities for the alleviation of material or energy shortages. It can help diversify energy and material sources and increase the security of supply through the reduction of dependence on import (Tomić and Schneider, 2017). This will only be possible when used products are no longer treated as valueless waste but perceived as potential resources of valuable materials instead. Reuse of waste which is directed towards the reduction of the environmental impact of manufacturing and consumption is fundamental to circular economy. Hence reverse logistics has become a vital element of the European integration. Pro-environmental activities creating closed economic cycles can only yield effects when approached in a systemic way. That is why European legislation binds the Member States to develop the reintroduction of waste into the economic cycle. Hence the purpose of the article is to evaluate the change in the basic measure of circular economy called

the circular material use rate as well as categorize the UE Member States in terms of variables determining the effects of the circular economy in the years 2010, 2012, 2014.

## **2. Relationship Between Circular Economy and Reverse Logistics**

Waste is a natural consequence of manufacturing and consumption processes. But the volume of waste today is so big that finding new solutions to managing or even avoiding waste has become priority for many global economies, including the European Union. Current waste management practice focuses on supporting sustainable development mainly through the recovery of waste. It is based more on environmental and economic than on social and technical effects (Iacovidou et al, 2017). It is important to include environmental, social and governance practice in the decision making process of enterprises (Kadłubek, 2016; Nitkiewicz, 2013; Włodarczyk, 2016). That is why the reduction of the environmental impact of manufacturing and consumption should go beyond managing waste to increasing the social awareness of the possibility of waste recovery.

Research on closed cycle economy shows that to just supply the product to the customer is not enough anymore. It is equally crucial to determine the responsibility for the product when it is used. But recycling alone will not ensure a closed material flow in the economy (Haas et al, 2015). The disassembly and recovery of a product should be planned right at the drawing board (Burchart-Korol, 2016), and its environmental impact should be clear to consumers at every stage of a product's life. So reaching the desired rate of consumption can only be done through the way the products are made, supplied, regenerated and renewed (Hazen, Mollenkopf and Wang, 2017), which will contribute to the efficient management of both resources and waste.

Sustainable use of resources is the key element to resource sufficiency in Europe, and, accordingly, to the EU circular economy. In this context, material efficiency can be increased by legal and administrative regulations which ensure durability, functionality, recovery, reuse and recycling of products. Regulations of this kind should be priority, because they allow for the elimination, or at least minimization, of material loss and the reduction of generated waste (Tecchio et al, 2017). Circular economy is more than an option. It is fundamental to maintaining economic wealth and ecological sustainability (Jawahir and Bradley, 2016). And the body of the European Union undertakes a number of legal initiatives in this respect. Table 1 shows the basic EU legal acts for environmental protection which ensure the functioning of circular economy.

**Table 1: Environmental Legislation of European Union**

Area	Legislations acts
<b>Waste reduction legislation</b>	<ul style="list-style-type: none"> <li>– The Waste Directive (Waste Framework Directive)</li> <li>– The Landfill Directive</li> <li>– The Packaging Directive</li> <li>– The End of Life Vehicles (ELV) Directive</li> <li>– The Waste Electrical and Electronic Equipment (WEEE) Directive</li> <li>– The Batteries Directive</li> </ul>
<b>Legislation addressing substance restriction</b>	<ul style="list-style-type: none"> <li>– The Reduction of Hazardous Substances (RoHS) Directive</li> <li>– The Ozone depleting substances Regulation</li> <li>– The Fluorinated greenhouse gases Regulation</li> <li>– The Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)</li> <li>– The Biocidal Product Regulation</li> <li>– The Use of certain Hazardous Substances in electrical and electronic equipment (RoHS) Directive</li> </ul>
<b>Legislation addressing performances of products put on the market</b>	<ul style="list-style-type: none"> <li>– The Ecodesign Directives: <ul style="list-style-type: none"> <li>➤ The energy-using products (EuP) Directive</li> <li>➤ The energy-related products (ErP) Directive</li> </ul> </li> <li>– The Standardisation Request</li> </ul>

Source: (Hughes, 2017)

A closer look at the EU legislation for the introduction and functioning of circular economy is enough to understand that is it perceived as a part of green economy (D'Amato et al, 2017). So circular economy can be defined as “a regenerative system in which resource input and waste, emission, and energy leakage are minimised by slowing, closing, and narrowing material and energy loops. This can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling” (Geissdoerfer et al, 2017).

One must keep in mind that today's economy is largely based on non-renewable resources. Through processing and reuse, circular economy can increase the accessibility of non-renewable resources such as metals (Smol, Kulczycka and Avdiushchenko, 2017). Thanks to this circular economy breaks the dependence of economic growth on limited resources (Raftowicz-Filipkiewicz, 2016). However, it should not only be discussed in the light of waste management improvement (Ghisellini, Cialani and Ulgiati, 2016). One of the premises of circular economy is the application of strategies which contribute to a more intelligent utilization of a product and aim at the implementation of intelligent manufacturing systems through (Kirchherr, Reike and Hekkert, 2017):

- a. Increasing the efficiency of energy consumption and production by reduced natural resources use.
- b. Increasing the intensity of product use (e. g. through sharing a product).
- c. Rejecting product's uselessness when it has lost its functions and not replacing it with a different one having the same functions.

It is believed that using circular economy helps extend the life of a product, which seems to be the most effective way to preserve resources (den Hollander, Bakker and Hultink, 2017).

It should not be forgotten, though, that circular economy has its negative aftermath as well. It contributes to economic growth which leads to the rebound effect which in turn results in reduced environmental benefits from circular economy (Zink and Geyer, 2017). Therefore, the management of a product's life cycle requires the synergy of activities in terms of collecting, recycling, reusing and recovering discarded products (Accorsi et al, 2015). The idea often mentioned in this context is the paradigm of circular economy which aims at the retention of high product added value for as long as possible and the reduction of production (Urbinati, Chiaroni and Chiesa, 2017). Accordingly, the systems of product value recovery should be subjected to comprehensive, systemic and coherent checks in terms of sustainable development (Millward-Hopkins et al, 2017).

Considering circular economy in the context of coherent processes of the recovery of value from waste and its reintroduction to the economic system points to a connection between circular economy and reverse logistics. Reverse logistics is perceived as one of the business processes in a sustainable supply chain (Feitó-Cespón et al, 2017). It encompasses a series of operations within a supply chain oriented at the development of returns of products, their processing and regeneration. In the literature, the notion of reverse logistics is most frequently used in the context of: sustainability, remanufacture, reuse, recycle, recover, redesign, reprocess, replace, resale, leftover, wholesale price, revenue sharing, cost sharing, risk sharing, rebate contract, quantity flexibility, quantity discount contract, buyback, return (Guo, 2017). As a matter of fact, the body of literature increasingly discusses closed-loop supply chain networks which are an integral part of processes realized in the traditional direction (forward) and reverse processes (Govindana, Fattahi and Keyvanshokoo, 2017). Only the consideration of closed economic cycles can lead to actual environmental effects ensuring a sustainable economic development.

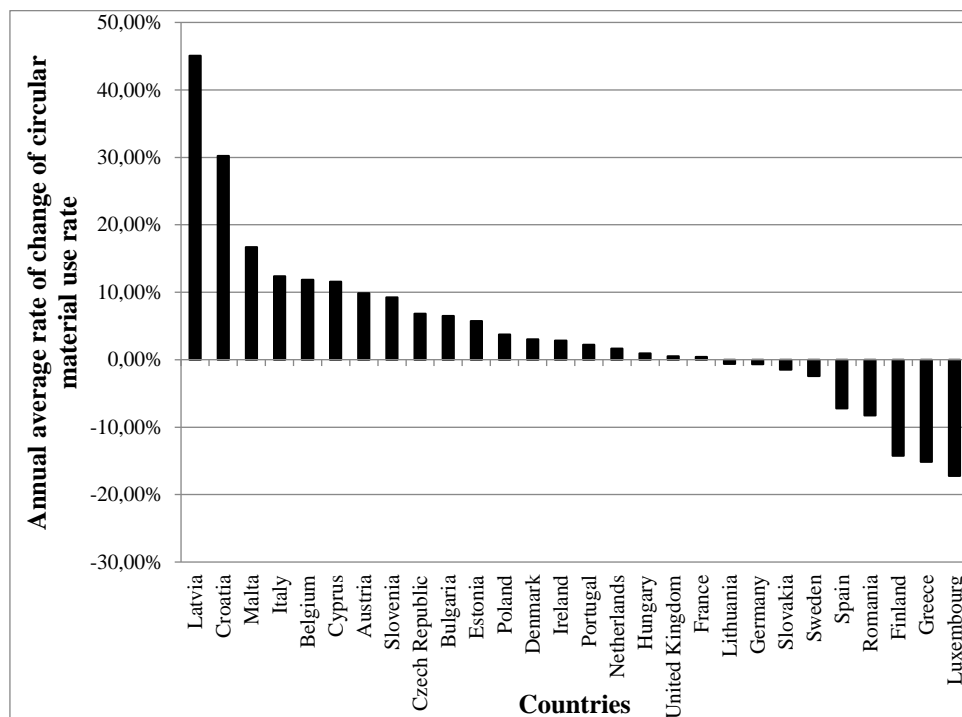
Effectiveness of pro-ecological activities within reverse logistics, and thereby of circular economy, is only possible through the development of proper tools supporting decision making processes in this respect and through a clear and forward-looking approach in order to reach economic and ecological value from a returned product (Madaan and Wadhwa, 2007) and to reintroduce it on the market. The measure showing the use rate of secondary products on a given market is the circular material use rate. It can determine which economies are characterized by a high level of effects in terms of circular economy. The measure depends on the level of the implementation and realization of circular processes equated with the processes of reverse logistics such as: recycling, efficient use of resources, utilization of renewable energy sources, remanufacturing, refurbishment and re-use of products and components. Accordingly, the article examines the changes in the value of circular material use rate in the years 2010-2014, as well as the level of the realization of the processes of reverse logistics in individual EU countries. The assumption was that the analysis would look at all current members of the European Union, regardless of their accession date.

### **3. Changing Dynamics of Circular Material Use Rate**

Circular material use rate measures the level of circular (secondary) materials utilization in the total use of materials in economy. The more secondary materials replace raw materials the lower the extraction rate of resources. The measure helps monitor the level of natural resources protection. The analysis of the annual average tempo of change (Figure 1) and the one-base indicators of dynamics (with 2010 as the base) for the value of the material use rate in the years 2010-2014 yielded the following conclusions:

- a. In the years 2010-2014 most EU countries show an annual average increase in the value of circular material use, the biggest in Latvia and Croatia and the smallest in Hungary, the United Kingdom and France. Luxembourg, Greece and Finland recorded the biggest annual average drop in the circular material use rate.
- b. The annual average increase in the level of circular material use rate observed in some countries was caused mainly by an increase in the year 2014 compared to 2010. Only in Cyprus, Slovenia, Estonia, Portugal, the Netherlands and Hungary the steepest growth of circular material use rate compared to 2010 happened in either 2012 or 2013.

**Figure 1: Annual Average Rate of Change of Circular Material Use Rate in the Years 2010-2014**



Source: author’s calculations based on (Eurostat [online], 2018)

An analysis of the level of circular material use rate complements the dynamics analysis. Table 2 presents the indicator values in the years 2010-2014 in the countries of the European Union.



**Table 2: Circular Material Use Rate in the Member States of European Union [in %]**

Countries	Circular material use rate				
	2010	2011	2012	2013	2014
Netherlands	25	25.1	26.7	27.5	26.7
Italy	11.6	12.1	14.6	16.4	18.5
France	17.5	16.8	16.9	17.3	17.8
Belgium	10.8	12.3	16	16.5	16.9
United Kingdom	14.6	14	13.9	14.5	14.9
Poland	10.8	9.2	10.6	11.8	12.5
Luxembourg	24.1	20.7	17.4	15.5	11.3
Estonia	8.8	14.3	19.2	14.6	11
Germany	11	10.3	10.7	10.9	10.7
Malta	5.5	4.7	4	8.9	10.2
Denmark	8.7	7.5	7.2	8.5	9.8
Austria	5.9	6.1	6.7	7.8	8.6
Slovenia	5.9	7.6	9.4	9.2	8.4
Spain	10.4	9.8	9.8	8.9	7.7
Finland	13.5	14	15.3	10.1	7.3
Czech Republic	5.3	5.4	6.3	6.7	6.9
Sweden	7.4	7.8	8.4	7.5	6.7
Hungary	5.2	5.4	6.1	6.2	5.4
Slovakia	5.1	4.7	4.1	4.6	4.8
Croatia	1.6	2.4	3.6	3.7	4.6
Lithuania	3.9	3.6	3.8	3.2	3.8
Latvia	0.7	1.6	0.7	2.3	3.1
Cyprus	2	2.4	3.5	3.9	3.1
Bulgaria	2.1	1.8	1.8	2.5	2.7
Portugal	2.2	2	2.1	2.6	2.4
Ireland	1.7	1.9	1.8	1.6	1.9
Romania	2.4	2.2	2.2	2	1.7
Greece	2.7	2.2	1.9	1.9	1.4

Source: author's calculations based on (Eurostat [online], 2018)

The highest value of the circular material use rate is observed in the year 2014 in the Netherlands (26.7%), Italy (18.5%), France (17.8%) and Belgium (16.9%), whereas the lowest in Ireland (1.9%), Romania (1.7%) and Greece (1.4%). The countries with the highest values of the circular material use rate are characterized by both high (higher than the third quartile) and low (lower than the first quartile, the Netherlands, France) average annual growth. The countries which saw an average annual drop in the value of circular material use rate are characterized in the examined years by the lowest (Greece) or moderate (Finland and Luxembourg) value of the circular material use rate, and Luxembourg had one of the highest values of circular material use rate in the years 2010 and 2011.

#### 4. Classification of the EU Countries According to the Level of the Realization of Circular Economy Goals

The value of circular material use is influenced by the intensification of the implementation and realization of reverse logistics processes in individual EU countries. The necessity to implement pro-ecological activities within reverse logistics stems from the increased pro-ecological awareness of consumers. The research shows that the pro-ecological behaviour of consumers depends on many factors such as gender, age, profession, monthly household income (Jotanović, Ratković and Zakić, 2017). These variables are both demographic and socioeconomic in nature, and so their value is highly influenced by belonging to a given social group, including nations. For this reason it was checked if there exist major differences (or similarities) in the level of the realization of reverse logistics processes in the Member Countries. Also, a classification of the countries in terms of similarity in a given scope was carried out.

In order to classify the EU countries according to the level of the realization of circular economy goals, Ward method from the group of agglomeration combinatorial methods was used. 28 EU countries were analyzed, and the classification was made for the years 2010, 2012 and 2014 which was dictated by the accessibility of data. The set of variables consisted of: share of renewable energy in gross final energy consumption (in %), recycling rate of municipal waste (in %), recycling rate of packaging waste (in %), recycling rate of e-waste (in %), recycling of biowaste (in %), recovery rate of construction and demolition mineral waste (in %), domestic material consumption (in tonnes per capita), generation of waste excluding major mineral wastes per domestic material consumption (in %). The classification for the years 2010, 2012 and 2014 is presented in figure 2.

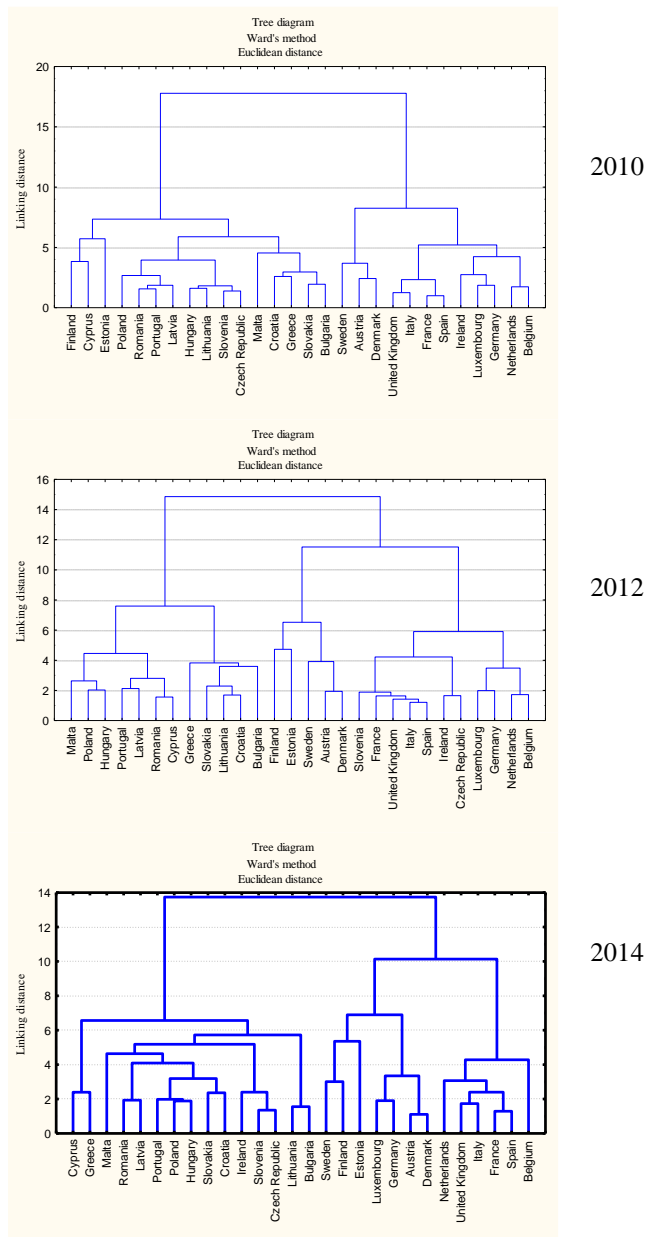
Assuming the binding distance 10, two groups of objects were obtained in the year 2010, and three in both 2012 and 2014. Group one is comprised mainly of countries which entered the European Union in the 2004-2013 period, the ones which accessed in the years 2012 and 2014 make group two, and the old members of the Union are found in group 3.

The classification indicates differences in the group membership and thereby similarities of the examined countries in the years 2010, 2012 and 2014. In 2010 two groups are distinguished: new and existing members of the European Union, yet among the countries which accessed the Union before 2004 Finland, Portugal and Greece showed greater similarity to the new members. In the years 2012 and 2014 the existing members of the Union made two separate groups, although Portugal and Greece and additionally Ireland in 2014 showed bigger similarity to the new members. Estonia was found in one group with the existing members in both years, while Slovenia and the Czech Republic in 2012. In the analyzed years the following countries were always in one group:

- Belgium, Netherlands,
- Poland, Cyprus, Romania, Portugal, Latvia, Hungary, Lithuania, Malta, Croatia, Greece, Slovakia, Bulgaria.

On the whole, though, the individual years of the examined period showed differences in the classification of the countries of the European Union in terms of the variables describing circular economy. This means we can speak of variability in the level of circular processes in the European Union. The variability is the result of significant differentiation in the level of: share of renewable energy in gross final energy consumption, recycling rate of municipal waste, recycling of biowaste, and generation of waste excluding major mineral wastes per domestic material consumption. Countries belonging to the same group showed a similar level of distinguished variables.

**Figure 2: The Classification of EU Member States for the Years 2010, 2012, 2014**



Source: author's calculations based on (Eurostat [online], 2018)

### 5. Conclusion

The article presents the analysis of the effects of activities aimed at the realization of circular economy in the countries of the European Union. Globalization of the economy increased the intensity of production and consumption processes, and accordingly, boosted the amount of generated waste. Striving for the reduction of negative effects of business and living has

become the basis for functioning of a society in the entire economy. The reduction of waste is possible through the reintroduction of materials into the economy which is the goal of circular economy and the reverse logistics processes realized within it. Coherent and collective policy in this respect leads to the achievement of environmental goals. Such policy is part of the EU legislation for environmental protection which is why the evaluation of effects of the activities towards circular economy seems well-founded.

The measure of circular economy is the circular material use rate. It turns out that the individual countries are characterized by different tendencies in terms of temporal change in the level of the circular material use rate value. In general, the biggest change is observed in the countries which showed some of the lowest values of the circular material use rate. Countries with significant ecological awareness show little change in the level of the circular use rate in the analyzed years.

On the basis of variables reflecting the effects of the implementation and functioning of circular economy and reverse logistics, the selected EU countries were compared and qualified. In order to do that a comparative analysis was used - especially classification methods. The analysis indicates variability in the intensification of activities within reverse logistics leading to the creation of closed material flows. It can be concluded, though, that the classification of the countries corresponds to the geopolitical arrangement into new and old members of the European Union.

But obviously, depending on the distance of the binding, it is possible to draw a more detailed differentiation of the EU countries in terms of the realization of circular processes. Nonetheless, the developed countries, where the level of ecological awareness is high, are the ones which support circular economy more. They have always shown a good level of secondary materials use, and continue to improve it.

## References

- [1] Accorsi, R., Manzini, R., Pini, C. and Penazzi, S. (2015). On the design of closed-loop networks for product life cycle management: Economic, environmental and geography considerations. *Journal of Transport Geography*, vol. 48, pp. 121-134.
- [2] Burchart-Korol, D. (2016). Zrównoważone zarządzanie zasobami naturalnymi bazując na gospodarce cyrkulacyjnej. *Zeszyty Naukowe Politechniki Śląskiej. Seria: Organizacja i Zarządzanie* z. 87, pp. 51-61.
- [3] D'Amato, D., Droste, N., Allen, B., Kettunen, M., Lähtinen, K., Korhonen, J., Leskinen, P., Matthies, B. D. and Toppinen, A. (2017). Green, circular, bio economy: A comparative analysis of sustainability avenues. *Journal of Cleaner Production*, vol. 168, pp. 716-734.
- [4] den Hollander, M. C., Bakker, C.A. and Hultink, E. J. (2017). Product Design in a Circular Economy Development of a Typology of Key Concepts and Terms. *Journal of Industrial Ecology*, vol. 21, Issue 3, pp. 517-525.
- [5] Eurostat (2018). *Statistics* [online]. [cit.2018-02-20]. Available at: <http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/themes>.
- [6] Feitó-Cespón, M., Sarache, W., Piedra-Jimenez, F. and Cespon-Castro, R. (2017). Redesign of a sustainable reverse supply chain under uncertainty: A case study. *Journal of Cleaner Production*, vol. 151, pp. 206-217.

- [7] Geissdoerfer, M., Savaget, P., Bocken, N. M. P. and Hultink, E. J. (2017). The Circular Economy: A new sustainability paradigm? *Journal of Cleaner Production*, vol. 143, pp. 757-768.
- [8] Ghisellini, P., Cialani, C. and Ulgiati, S. (2016). A review on circular economy: the expected transition to a balanced interplay of environmental and economic systems. *Journal of Cleaner Production*, vol. 114, pp. 11-32.
- [9] Govindana, K. Fattahi, M. and Keyvanshokoo, E. (2017). Supply chain network design under uncertainty: A comprehensive review and future research directions. *European Journal of Operational Research*, vol. 263, pp. 108-141.
- [10] Guo, S., Shen, B., Choi, T.-M. and Jung, S. (2017). A review on supply chain contracts in reverse logistics: Supply chain structures and channel leaderships. *Journal of Cleaner Production*, vol. 144, pp. 387-402.
- [11] Haas, W., Krausmann, F., Wiedenhofer, D. and Heinz, M. (2015). How Circular is the Global Economy?: An Assessment of Material Flows, Waste Production, and Recycling in the European Union and the World in 2005. *Journal of Industrial Ecology*, vol. 19, Issue 5, pp. 765-777.
- [12] Hazen, B. T., Mollenkopf, D.A. and Wang, Y. (2017). Remanufacturing for the Circular Economy: An Examination of Consumer Switching Behavior. *Business Strategy and the Environment*, vol. 26, pp. 451-464.
- [13] Hughes, R. (2017). The EU Circular Economy package – life cycle thinking to life cycle law? *Procedia CIRP*, vol. 61, pp. 10-16.
- [14] Iacovidou, E., Millward-Hopkins, J., Busch, J., Purnell, P., Velis, C.A., Hahladakis, J.H., Zwirner, O. and Brown, B. (2017). A pathway to circular economy: Developing a conceptual Framework for complex value assessment of resources recovered from waste. *Journal of Cleaner Production*, vol. 168, pp. 1279-1288.
- [15] Jawahir, I. S. and Bradley, R. (2016). Technological Elements of Circular Economy and the Principles of 6R-Based Closed-loop Material Flow in Sustainable Manufacturing. *Procedia CIRP*, vol. 40, pp. 103-108.
- [16] Jotanović, S. R., Ratković, M. and Zakić, N. (2017). Pro-environmental activities of consumers. *Polish Journal of Management Studies*, vol. 16 (1), pp. 55-66.
- [17] Kadłubek, M. (2016). Chosen Theoretical and Practical Areas of Green Logistics Management in Transport Sector in European Union. In Kovářová, E., Melecký, L. and Staničková, M. (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, 2016, pp. 407-414.
- [18] Kirchherr, J., Reike, D. and Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation & Recycling*, vol. 127, pp. 221-232.
- [19] Madaan, J. and Wadhwa, S. (2007). Flexible Process Planning Approaches for Sustainable Decisions in Reverse Logistics System. *Global Journal of Flexible Systems Management*, vol. 8, No. 4, pp 1-8.
- [20] Millward-Hopkins, J., Busch, J., Purnell, P., Zwirner, O., Velis, C. A., Brown, A., Hahladakis, J. and Iacovidou, E. (2017). Fully integrated modelling for sustainability

- assessment of resource recovery from waste. *Science of the Total Environment*, vol. 612, pp. 613-624.
- [21] Nitkiewicz, T. (2013). *Ekologiczna ocean cyklu życia produktu w procesach decyzyjnych przedsiębiorstw produkcyjnych*. Częstochowa: Wydawnictwo Politechniki Częstochowskiej.
- [22] Raftowicz-Filipkiewicz, M. (2016). From sustainable development to circular economy. *Economic and Environmental Studies*, vol. 16, No. 1, pp. 103-113.
- [23] Smol, M., Kulczycka, J. and Avdiushchenko, A. (2017). Circular economy indicators in relation to eco-innovation in European regions. *Clean Technologies and Environmental Policy*, vol. 19, pp. 669-678.
- [24] Tecchio, P., McAlister, C., Mathieux, F. and Ardente, F. (2017). In search of standards to support circularity in product policies: A systematic approach. *Journal of Cleaner Production*, vol. 168, pp. 1533-1546.
- [25] Tomić, T. and Schneider, D. R. (2017). Municipal solid waste system analysis through energy consumption and return approach. *Journal of Environmental Management*, vol. 203, pp. 973-987.
- [26] Urbinati, A., Chiaroni, D. and Chiesa, V. (2017). Towards a new taxonomy of circular economy business models. *Journal of Cleaner Production*, vol. 168, pp. 487-498.
- [27] Włodarczyk, A. (2016). The assessment of market risk for the socially responsible companies in the background of the EU climate policy. In Kovářová, E., Melecký, L. and Staníčková, M. (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, 2016, pp. 1085-1095.
- [28] Zink, T. and Geyer, R. (2017). Circular Economy Rebound. *Journal of Industrial Ecology*, vol. 21, Issue 3, pp. 593-602.

## Investment as a Determinant of the Sustained Economic Growth in the European Union after Crisis 2008 – 2009

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### **Abstract**

*The subject of the paper is an analysis of post-crisis economic recovery in the European Union, which started much later than in the United States. A secular stagnation was a serious jeopardy for the European economy as a result of prolonged low investment propensity. However, after the second wave of recession, economic growth in the EU (from 2014) has been becoming more sustained. Nevertheless, the risk of secular stagnation persists because the investment rate still remains low. Analysis contains: basic theoretical assessment of the impact of investment on the economic growth and the statistical data cover two periods: 2009-2013 and 2014-2017. Presenting the results of GDP growth and its factors we use a demand and supply-side approach. Attention has been focused on investment and its barriers: macroeconomic, structural and resulting from a low quality of the business environment. The empirical analysis shows a large EU investment gap, deepened in the period 2009–2013 and the low rate of investment growth from 2014, when the EU economies entered the economic recovery.*

**Keywords:** determinants of investment, EU, investment gap, main barriers

**JEL Classification:** E22, E32, O11, O47

### **1. Introduction**

The recent financial and economic crisis 2008-2009, due to its course and consequences, is one of the greatest in the history of the market economy. Earlier deep recessions, which resulted in a permanent lack of sustainable economic growth ability in the long term, especially due to a low propensity to invest, were: the 1870s, the 1930s and the 1970s. The recent economic recession (2009) is most often compared to the recession of 1929-1933, mainly due to large declines in GDP, rising unemployment and lasting economic stagnation. That is why L. Summers at the IMF Research Conference on November 8, 2013, referring to the concept of A. Hansen's secular stagnation, presented the hypothesis of a new secular stagnation. It has attracted a lot of followers, particularly among American economists, who considered that the protracted weak economic situation in the European Union had the characteristics of secular stagnation. Such an evaluation of the economic situation in the European Union in 2009-2013 was confirmed by a decrease in the investment (-2.77% per year) and consumption rates (-0.01%) and, consequently, by a fall of GDP (-0.14%) (Table 1). At the same time, investment, consumption and GDP grew in the United States (except for 2008-2009) (AMECO [online], 2018).

The post-crisis recovery in the EU has continued since 2014. It should be stressed that the group of Central and Eastern European EU members, which are outside the euro area, have a

significant impact on the average (unweighted) growth rate in the EU. In 2016, GDP growth in the EU was 1.93%, while in seven CEE countries the growth rates were as follows: Hungary 2.21%, the Czech Republic 2.59%, Poland 2.86%, Croatia 2.98%, Slovakia 3.32%, Bulgaria 3.94% and Romania 4.59% (AMECO [online], 2018).

The question arises on the sources of a delayed yet stabilising economic recovery in the EU, which is crucial in the context of the threat of secular stagnation. According to a European Commission study, private consumption remains the main driver of post-crisis GDP growth in the EU. External demand and monetary policy also have an increasing impact (European Commission, 2018, p. 10-11). The investment rate is still low and labour productivity growth is lower than expected (European Commission, 2018, p. 1). Reforms in member states to create a more favourable business environment have a positive impact on growth in economic activity.

The aim of the paper is to analyze annual growth rates of investment, consumption, exports and GDP and to assess technological progress and structural changes measured by the growth of total factor productivity and labour productivity, as well as to identify factors influencing the level of investment. The analysis of the statistical data covers two periods: 2009-2013 and 2014-2017. Average annual growth rates of GDP, consumption, investment and net exports over the period 2009-2013 show the effects of the first and second wave of recession on the European Union as a whole, as well as on individual countries and the US due to a decrease in domestic and external demand. By contrast, the same macroeconomic indicators for 2014-2017 illustrate the growth of these three components of total demand and their impact on GDP growth in the EU, member states and the US. The same time periods were used in the assessment of the growth rate of supply-side of GDP growth factors. Considering the importance of investment in creating the foundations for sustainable economic growth and ensuring micro and macro-economic balance, the study included investment drivers and barriers. The theoretical works and empirical analyses of different authors as well as European Commission and European Central Bank were used to carry out the analysis and evaluations in the paper. Statistical data were obtained from the AMECO database and the Conference Board Total Economy Database.

## **2. The Role of Investment in Economic Growth - a Theoretical Framework**

A timeless contribution to the theory of economic development was made by A. Hansen, who presented an original interpretation of regressive processes in the US economy in the early 1930s, recognizing that recession and prolonged weak economic situation cannot be treated as a phase of the business cycle, but as an economic slowdown caused by low investment, slowdown of innovation and technological progress and sharp decline in the population growth rate. In formulating the hypothesis of secular stagnation, he stressed that it is a consequence of underinvestment in relation to higher savings (Taylor, 2013). A. Hansen specialized in both theoretical and empirical research on business cycles. According to his concept, sustained long-term GDP growth can only be achieved through investment leading to using new, more efficient technologies. Whereas, replacement investments, not supported by new technologies, were considered to be instruments of diminishing pro-growth impulses (Mucha-Leszko, 2016, p. 436-449). A. Hansen believed that recovery in the United States during 1934 -1937 was the result of an increase in consumer spending, such as household loans, help for veterans, wage increases and the introduction of a social security system, and that such measures could not ensure a sustained recovery. Moreover, technological progress stopped in the 1930s (Brown, 1989, p. 1-10).



Hansen's approach to the role of investment in economic development is shared by many other American economists. W. C. Peterson (1988, p. 198-199) focuses on the demand side of investment expenditure and its impact on the functioning of the economy, pointing out that: 1) investment expenditure has a strong impact on the total demand, 2) investment expenditure has a particular strategic impact on the economy, as purchases of capital goods contribute more to employment and income growth than purchases of consumer goods, 3) investment spending is more sensitive to changes in the economy than consumption expenditure, which is due to different assessments of growth prospects and investment effectiveness, as well as different investor risk propensity, 4) the main impact of investment expenditure on economic growth relies on the development of higher productive manufacturing capacity.

R. J. Barro (1990, p. 199-205) assesses the impact of investment on the economy from the perspective of their impact on cyclical development, economic growth and unemployment. The basis for conclusions and generalisations is the analysis of investment expenditures in 1925-1987 and the level of consumption and investment during the recessions in 1933-1982 in the United States. Studies show that investment expenditure was much more sensitive to economic downturns (and this also applied to replacement investments) than consumption expenditure. However, this general conclusion cannot be left without further comment. Consumption declines slightly during moderate recessions and falls significantly in periods of strong economic downturns. The level of consumption depends on the fall in income as a result of an increase in unemployment, social benefits and employers' wage policies. Consumers' behaviour may also change as a result of other factors that affect consumers' propensity to consume and their propensity to save. In the European Union, for example, during the 2001-2003 recession, consumer behaviour was against the principle of a decline in the propensity to save money in order to maintain consumption. On the contrary, the propensity to save increased as a result of states' pension and health care reforms. Reducing the scope of social security by states contributed to an increase in the propensity to accumulate individual savings (European Commission, 2004, p. 33).

The recent financial and economic crisis of 2008-2009, due to the extent, the scale of financial market destabilisation and the deep disturbance of economic equilibrium and prolonged economic stagnation, contributed to intensifying discussions and scientific research in order to solve economic problems and reduce the risk of repetition of similar processes destabilising national economies and international economic relations. The post-crisis economic situation is characterised by a persistent low propensity to invest, which, in particular as a major barrier to economic growth, is the subject of debates and initiatives supporting the development of investment in the European Union. The author of the hypothesis on the new secular stagnation L. Summers (2015) highlights many reasons for the persistence of private savings over private investment, which are not directly linked to the cyclical development of the market economy, but are a consequence of structural changes and to some extent of monetary policy. The most important causes of this problem are the following: 1) Asian countries' accumulation of high foreign currency reserves; 2) ageing of the population in rich countries and their lower propensity to consume and higher propensity to save due to increasing life expectancy; 3) lower natality, slower labour force growth and lower GDP growth; 4) lower employment growth - less need for job creation; 5) less necessity for investment as a result of e-business development - it does not require as much capital input, 6) low effectiveness of interest rate policy during deflation and low inflation, i. e. limited possibilities of achieving satisfactory economic growth and financial stability as a result of the use of traditional monetary policy instruments.

K. Pichelman (2015) argues that the hypothesis of a new secular stagnation was justified precisely by explaining the reasons for the fall in business and consumer spending at various interest rate levels. Investment demand can be reduced when labour resources and labour productivity decline. Increase in the income of the population may result in funds being transferred to the capital market. Low inflation does not cause an escape from money and rather slows down the growth of consumption and investment. If interest rates are higher than zero, then the savings that companies cannot invest are accumulated and risk aversion increases in a weak economic situation. Therefore, there is also no guarantee that, at zero interest rates, the investments will be high enough for the savings glut to be finished.

An increase in the propensity to invest may occur in a situation where investors will assess the economic prospects and opportunities as improving to achieve satisfactory profits. Investment decisions are also determined by the cost of capital, technological progress and state policy. The essence of the problem in today's economic situation lies in convincing private investors to treat real investment as more advantageous than investing capital in instruments of the financial market. The financialisation of the economy has caused the capital to be almost sucked in by the financial market, thus the real economy is deprived of capital and thus its development opportunities are limited (Mucha-Leszko, 2016, p. 438). However, the high propensity to invest is not a sufficient condition for sustained long-term economic growth, as can be seen in the case of Spain. The high investment rate, especially during the credit boom after the adoption of the euro (1999), led to overinvestment in the construction industry and a significant decline in investment during a longer than in other countries period of recession. The basis of sustained GDP growth is productive investment stimulated by scientific and technological progress. The result is development of new products and new types of services. They also provide opportunities to make better use of new technologies coming from abroad alongside capital in the form of foreign direct investment. According to Solow's theory of endogenous growth (1957), modern technology investment contributes to the total factor productivity (TFP) growth. The study on the contribution of indirect factors to real GDP growth based on TFP is widely used in analyses of labour productivity and sources of long-term economic growth. The TFP contains all factors that affect GDP but are not capital and labour input, and growth in total factor productivity is interpreted as a measure of technological progress and structural changes.

To conclude, in the assessment of the role of investment in the economy, the demand and supply side effects are analysed. In the first case, investment expenditures are a component of aggregate demand, while in the second case, investment expenditures are the basis for growth of production potential and creation of technological progress and innovation in the economy. The supply side of investment is crucial because it determines the conditions and opportunities for dynamic economic growth, structural changes and competitiveness.

In the next part of the paper we proceed to empirical analysis. We present the results of GDP growth and its factors in the EU countries in demand-side view for the years 2009-2013, which is the period covering two recessions and symptoms of a weak recovery, and for the years 2014-2017, in which the average annual economic growth rate of the European Union has come close to the level achieved by the United States at the same time. Then we present TFP and labour productivity ratios, which are the result of investment and structural changes. Attention has been focused on investment since they offer an opportunity to maintain a high rate of GDP growth in the long term and to reduce the EU's technological and economic gap towards the US, which increased particularly in 2009-2013.

### 3. GDP Growth and its Factors in 2009-2017: a Demand and Supply-Side Analysis

Table 1 contains figures illustrating average growth rates of GDP, consumption, investment and exports of goods and services for the 28 EU countries and the US (see also Figures 1 – 4).

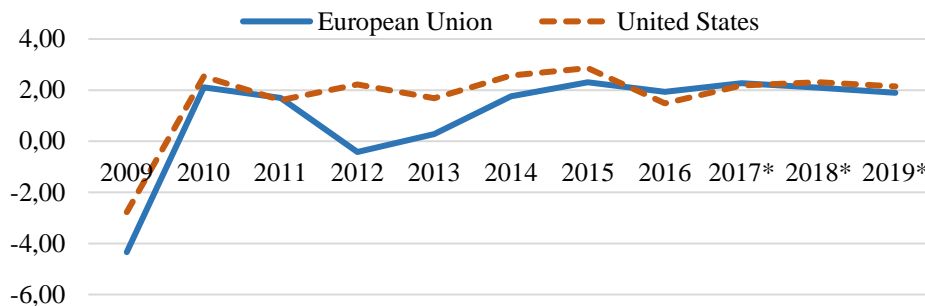
**Table 1: Growth of GDP, Consumption, Investment and Exports of Goods and Services in 2009 – 2017 (Average Annual Growth Rate in %, in 2010 Constant Prices)**

Country	2009 - 2013				2014 - 2017			
	GDP	Consumption	Investment	Exports	GDP	Consumption	Investment	Exports
EU - 28	<b>-0.14</b>	-0.01	-2.77	2.00	<b>2.07</b>	1.75	3.43	4.74
Austria	<b>0.34</b>	0.71	-0.13	1.36	<b>1.49</b>	1.07	2.01	3.32
Belgium	<b>0.54</b>	0.99	-0.91	1.77	<b>1.49</b>	1.00	4.08	5.16
Bulgaria	<b>0.11</b>	-0.24	-7.54	4.72	<b>3.19</b>	3.37	0.73	5.53
Croatia	<b>-2.52</b>	-2.05	-6.82	-0.54	<b>1.98</b>	1.26	2.60	6.84
Cyprus	<b>-1.83</b>	-1.76	-12.35	1.07	<b>1.79</b>	1.59	9.70	4.32
Czech Republic	<b>-0.41</b>	0.03	-2.69	3.69	<b>3.73</b>	2.75	4.17	6.52
Denmark	<b>-0.11</b>	0.12	-2.37	0.74	<b>1.81</b>	1.37	3.59	3.19
Estonia	<b>0.28</b>	-0.62	1.85	7.10	<b>2.75</b>	3.25	0.95	2.43
Finland	<b>-0.98</b>	0.61	-2.85	-1.91	<b>1.15</b>	1.19	3.06	2.10
France	<b>0.37</b>	0.85	-1.10	1.82	<b>1.20</b>	1.32	1.78	3.12
Germany	<b>0.62</b>	0.95	0.11	2.62	<b>1.94</b>	1.90	3.05	4.03
Greece	<b>-5.89</b>	-5.37	-17.13	-2.19	<b>0.46</b>	0.16	0.41	3.96
Hungary	<b>-0.76</b>	-1.31	-2.44	1.77	<b>3.38</b>	3.27	4.70	7.19
Ireland	<b>0.37</b>	-1.81	-3.85	3.64	<b>10.96</b>	3.20	27.67	15.33
Italy	<b>-1.55</b>	-1.16	-5.67	0.39	<b>0.88</b>	0.98	1.24	3.59
Latvia	<b>-1.07</b>	-0.94	-4.14	4.69	<b>2.75</b>	2.81	0.61	4.20
Lithuania	<b>0.04</b>	-1.49	-2.15	8.76	<b>2.93</b>	3.48	4.13	4.19
Luxembourg	<b>1.27</b>	2.05	2.43	2.16	<b>3.78</b>	2.64	0.88	7.14
Malta	<b>1.94</b>	1.29	0.23	3.31	<b>6.59</b>	3.88	10.95	3.67
Netherlands	<b>-0.39</b>	-0.25	-4.14	2.39	<b>2.27</b>	1.15	5.99	5.16
Poland	<b>2.89</b>	1.94	0.64	5.13	<b>3.55</b>	3.34	3.11	7.40
Portugal	<b>-1.61</b>	-1.94	-8.54	3.35	<b>1.72</b>	1.76	4.47	5.64
Romania	<b>-0.53</b>	-1.23	-8.30	8.49	<b>4.33</b>	5.83	2.17	7.29
Slovakia	<b>1.12</b>	0.01	-1.73	5.39	<b>3.30</b>	2.60	3.90	5.29
Slovenia	<b>-1.94</b>	-0.82	-9.18	0.82	<b>3.28</b>	2.52	1.24	6.52
Spain	<b>-1.84</b>	-1.92	-8.15	2.23	<b>2.79</b>	2.12	4.65	4.81
Sweden	<b>0.88</b>	1.61	-0.26	0.75	<b>3.41</b>	2.29	6.40	4.61
United Kingdom	<b>0.50</b>	0.19	-0.32	0.91	<b>2.16</b>	1.99	3.28	3.36
United States	<b>1.05</b>	0.81	0.21	3.37	<b>2.27</b>	2.53	3.01	1.90

Source: authors' calculations based on (AMECO [online], 2018).

Because of the large and diversified decreases in GDP between member states during the recession in 2009 and the protracted economic stagnation in most EU countries, in order to determine the effects of the crisis on the whole group and on individual countries, two periods have been identified: 2009-2013 (recessions and stagnation) and 2014-2017 (economic recovery in all EU-28 countries).

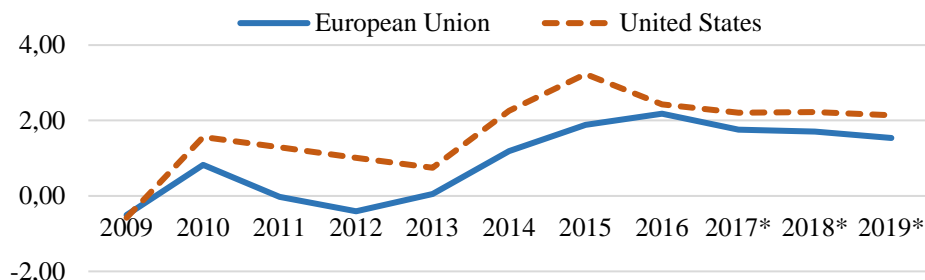
**Figure 1: Growth of GDP in the European Union (28) and the United States in 2009 – 2019\* (Annual Growth Rate in %, in 2010 Constant Prices)**



\* 2017 – 2019: forecast

Source: own elaboration based on (AMECO [online], 2018)

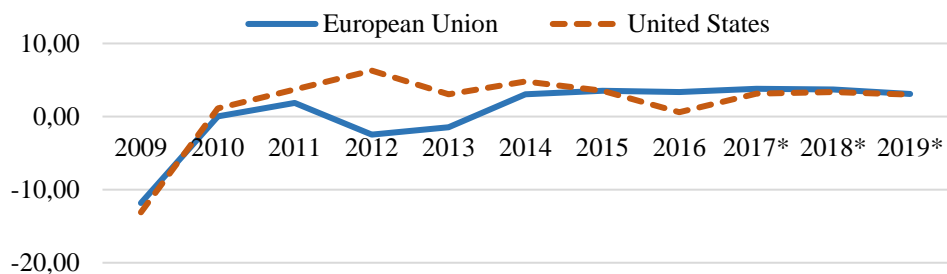
**Figure 2: Growth of Consumption in the European Union (28) and the United States in 2009 – 2019\* (Annual Growth Rate in %, in 2010 Constant Prices)**



\* 2017 – 2019: forecast

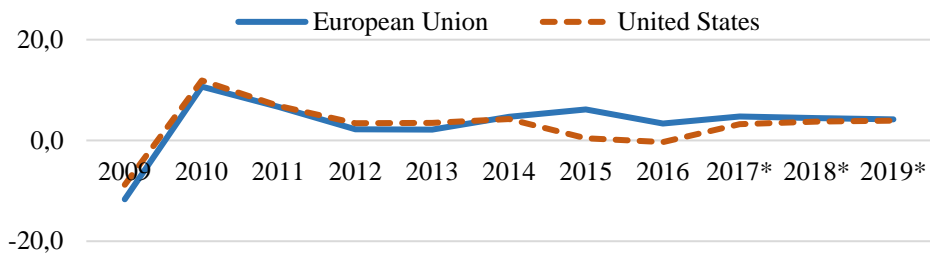
Source: own elaboration based on (AMECO [online], 2018)

**Figure 3: Growth of Investment in the European Union (28) and the United States in 2009 – 2019\* (Annual Growth Rate in %, in 2010 Constant Prices)**



\* 2017 – 2019: forecast

Source: own elaboration based on (AMECO [online], 2018).

**Figure 4: Growth of Exports of Goods and Services in the European Union (28) and the United States in 2009 – 2019\* (Annual Growth Rate in %, in 2010 Constant Prices)**

\* 2017 – 2019: forecast

Source: own elaboration based on (AMECO [online], 2018)

Average indicators for 2009-2013 show that GDP growth in the US was 1.05% (annual average) and in the EU there was a decline in GDP of -0.14%. Thus, the effects of the crisis in the European Union were much greater than in the United States. However, the situation in this field varied widely between member states. Exactly half of the countries (14) suffered a drop in GDP in the analysed period. In the other 14 countries, GDP growth also varied from 0.04% in Lithuania to 2.89% in Poland. Among the countries that achieved the highest GDP growth rate, apart from Poland, were Malta, Luxembourg, Slovakia, Sweden, Germany, Belgium and the United Kingdom (growth rates between 1.94% to 0.50%). In the group of countries that have suffered losses in GDP, the range of declines was from -0.11% in Denmark to -5.89% in Greece. The countries most affected by the crisis (apart from Greece) were Croatia, Slovenia, Spain, Cyprus, Portugal, Italy, Latvia, Finland and Hungary (from -2.52% to -0.76%). There were only four countries that achieved higher annual average GDP growth than the US in 2009-2013: Poland, Malta, Luxembourg and Slovakia. Unfortunately, countries with high GDP declines were a large group dominated by southern countries.

The figures show that the main contributor to the GDP decline was investment, which in the EU fell by -2.77% per year, and in the US investment was increasing, but only by 0.21%. GDP growth in the US was mainly maintained by consumption and exports. In the EU, even changes in consumption were on average slightly below zero. Whereas, exports have had a positive impact on economic growth in the EU. The decrease in investment in the member states was highly varied. Firstly, only a few countries recorded low annual average growth rates: Luxembourg 2.43%, Estonia 1.85%, Poland 0.64%, Malta 0.23% and Germany 0.11%. Secondly, the decrease was lower than the EU-28 average in ten countries: Austria, Sweden, the UK, Belgium, France, Slovakia, Lithuania, Denmark, Hungary and the Czech Republic (from -0.13% in Austria to -2.69% in the Czech Republic). Serious economic impacts were caused by a large drop in investment, which occurred in the following countries: Greece, Cyprus, Slovenia, Portugal, Romania, Spain, Bulgaria, Croatia and Italy (from -17.13% in Greece to -5.67% in Italy). Some of the countries with a deep fall in investment have not suffered any loss of GDP between 2009 and 2013 or the decline in GDP was modest because they achieved relatively high average annual growth of exports. These were: Bulgaria, Ireland and Romania. In addition, exports growth has maintained the economic growth in Lithuania, Estonia, Slovakia, Poland, Latvia and the Czech Republic. Consumption was an important demand driver in Luxembourg, Poland, Sweden, Malta, Belgium, Germany, France, and Austria.

The economic recovery in 2014-2017 reached an average annual GDP growth rate of 2.07% in the EU and 1.27% in the US. GDP growth occurred in all member states. The highest outputs measured by the average annual GDP growth rate were achieved by Ireland, Malta, Romania,

Luxembourg, the Czech Republic, Poland, Sweden, Hungary, Slovakia, Slovenia and Bulgaria (from 10.96% in Ireland to 3.19% in Bulgaria). The lowest output (GDP growth of 0.46%-1.49%) was in Greece, Italy, Finland, France, Belgium and Austria. It should be noted that the first three of these six countries suffered large GDP losses in 2009-2013 and continued to have a significantly lower economic output than the EU average. However, Spain has achieved an economic recovery thanks to relatively high growth in investment and exports. The structure of investments - an increase in expenditures on production equipment - is a symptom of positive changes in the Spanish economy. The improvement in investment also occurred in Cyprus and Portugal (European Commission, 2017, p. 10).

**Table 2: Growth of Total Factor Productivity and Growth of Labour Productivity per Hour Worked in the European Union Countries and the United States in 2009-2013 and 2014- 2016 (Average Annual Growth Rate, Percent Change)**

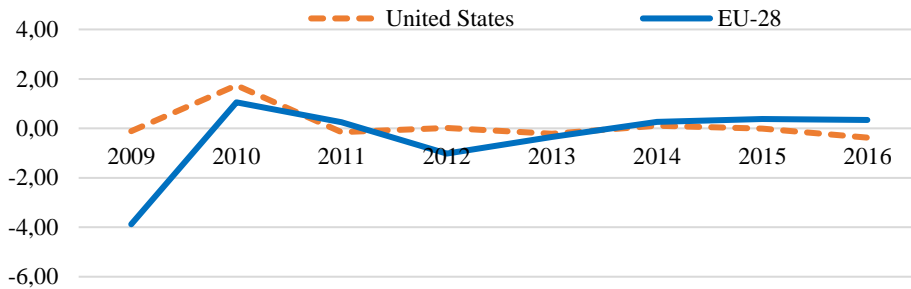
Country	Growth of TFP		Growth of Labour Productivity	
	2009-2013	2014-2016	2009-2013	2014-2017
EU-28*	-0.79	0.33	0.33	0.94
Austria	-0.70	-0.17	0.77	1.16
Belgium	-0.95	-0.30	0.21	0.76
Bulgaria	-0.49	1.08	2.90	2.37
Croatia	-2.37	0.06	0.69	1.40
Cyprus	-2.01	0.08	0.71	0.51
Czech Republic	-1.84	1.34	0.35	2.33
Denmark	-0.53	0.08	1.21	0.93
Estonia	0.21	0.56	2.29	1.10
Finland	-1.70	-0.39	-0.15	0.41
France	-0.72	-0.18	0.61	0.91
Germany	-0.37	0.61	0.67	1.19
Greece	-4.05	0.40	-1.73	-0.62
Hungary	-1.01	0.71	0.35	0.34
Ireland	0.15	1.39	4.08	2.81
Italy	-1.11	-0.09	0.23	-0.05
Latvia	0.68	2.37	2.92	2.69
Lithuania	0.58	0.30	2.80	0.52
Luxembourg	-2.56	1.62	0.16	1.13
Malta	-0.39	1.68	1.21	1.77
Netherlands	-0.97	0.56	0.19	0.95
Poland	0.75	0.31	3.60	2.14
Portugal	-1.39	-0.50	1.31	0.29
Romania	-1.17	1.97	2.11	4.33
Slovak Republic	0.19	1.37	1.84	1.70
Slovenia	-2.00	1.09	-0.27	1.03
Spain	-1.01	0.41	1.92	0.55
Sweden	-0.80	0.85	0.47	1.53
United Kingdom	-0.83	0.22	0.10	0.58
United States	0.25	-0.09	1.48	0.67

\*For EU-28: growth of labour productivity per person employed.

Source: authors' calculations based on (The Conference Board [online], 2018).

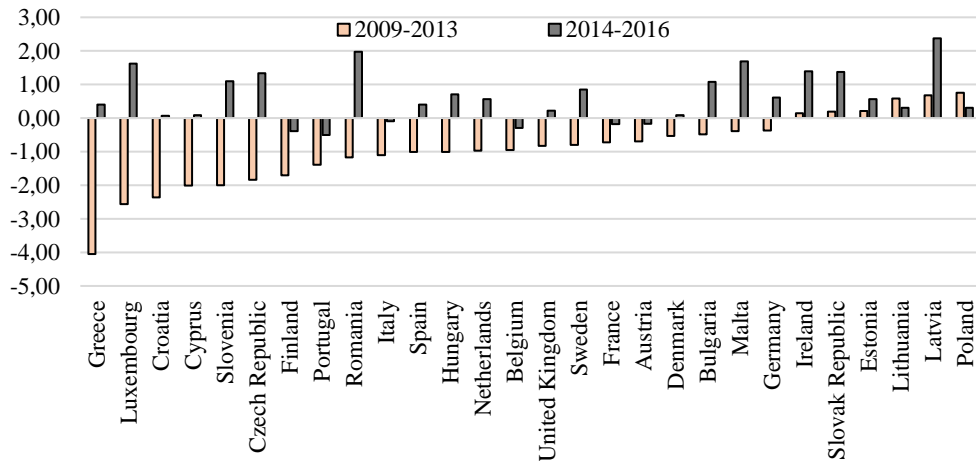
The statistical data shows that the countries most affected by the crisis are a varied group in terms of post-crisis economic recovery. Ireland, with impressive economic growth, investment and export performance, was also among these countries (Table 1). Moreover, Ireland achieved the highest growth rates of total factor productivity and labour productivity in the EU-15 (Table 2 and Figure 6). They are the result of high investment in intangible assets (such as intellectual property rights) and the activities of international corporations (European Commission, 2017, p. 10).

**Figure 5: Growth of Total Factor Productivity in the European Union and the United States in 2009 – 2016 (in %)**



Source: own elaboration based on (The Conference Board [online], 2018)

**Figure 6: Growth of Total Factor Productivity in the European Union Countries in 2009-2013 and 2014- 2016 (Average Annual Growth Rate in %)**



Source: own elaboration based on (The Conference Board [online], 2018)

In regard to the thesis that growth of total factor productivity (TFP) and labour productivity are a prerequisite for long-term economic growth, in Table 2 we present the average annual TFP and labour productivity growth rates for 2009-2013 and 2014-2017 for the EU-28, member states and the US. TFP decreased by -0.79% in the EU-28 in 2009-2013 and by -0.33% in 2014-2016. In the US, there was a slight increase in the first period and in the second a minimal decrease in these indicators. More detailed data of TFP developments in 2009-2016 is presented in Figure 5. In the EU-28 there was a large fall in TFP in 2009 and a significant increase in 2010, followed by a fall of around -1% in 2012. After that, TFP

indicators improved and from 2014 they reached positive values and in the US they started to decrease. Before the crisis the TFP growth rate in the UE was periodically higher than in the US (Mucha-Leszko and Twarowska, 2016, p. 34). The EU-28 labour productivity growth rate was low in 2009-2013 (0.33%) and significantly higher during the economic recovery in 2014-2017 (0.94%) , while the US followed an opposite trend, with higher growth in the first period (1.48%) and a decline during 2014-2017 (0.67%). Total factor productivity and capital expenditures are the two main factors influencing the growth rate of labour productivity. The question therefore is why productivity has increased despite the fall in TFP. This concerns mainly the years of the crisis (2009-2013). In countries where investments were high, especially in housing before 2008, the recession resulted in the decline of the least efficient sectors and a decrease in employment, as well as an improvement in the capital-labour ratio. Both these factors have contributed to productivity growth. Spain was the best example of such processes (Mucha-Leszko, 2013, p. 107-120).

The indicators of TFP (Table 2) in the member states has been varied, but some patterns can be observed. In 2009-2013, the only countries where TFP increased were the five new member states (Poland, Latvia, Lithuania, Estonia and Slovakia) and Ireland. The deepest decreases in TFP rates occurred in Greece, Luxembourg, Croatia, Cyprus, Slovenia, the Czech Republic, Finland and Portugal. During the post-crisis economic recovery, TFP growth was observed in 22 of the EU countries, while in the remaining 6 countries TFP decreased, especially in Portugal, Finland and Belgium, but in France, Austria and Italy it was modest (Table 2). The highest TFP growth in the new EU-10 member states, with the exception of Cyprus and Croatia, is a peculiar feature underpinning long-term economic growth. In the group of highly developed EU-15 countries, good results in TFP growth in 2014-2017 were achieved by Luxembourg, Ireland, Sweden, Germany and the Netherlands, still growth rates were significantly lower than most of the new member states. It should be noted that investment, TFP and labour productivity growth are key prerequisites for closing the economic gap in the EU-12 countries. In the years preceding the crisis, the Baltic states (Lithuania, Latvia and Estonia), Romania and Bulgaria had the highest economic growth rates. This was mainly due to the inflow of foreign direct investment and access to low-interest loans. Foreign direct investment also contributed to growth of TFP, labour productivity and exports. In the second half of 2008, when the financial crisis began, CEE countries were in different phases of the business cycle. The degree of overheating before the crisis was decisive for the depth of the recession, and the Baltic states have suffered the greatest losses in GDP. Escalation of crisis phenomena increased the risk and led to withdrawal of foreign investors, which took place mainly in Estonia, Latvia, Lithuania and Romania (European Central Bank, 2010, p. 87-88).

As mentioned above, investment and TFP affect labour productivity, but its growth or decline is also influenced by other factors, including structural changes in economies. They caused both growth and decline in labour productivity, depending on which areas of the economy the most bankruptcies occurred and what impact they had on labour productivity. In countries where credit boom and excessive growth in the real estate market have occurred, the sudden fall in property prices led to the collapse of the housing sector and the production of construction materials (e. g. Spain), which are the lowest productivity sectors. This type of structural changes and loss of jobs by the lowest-skilled employees contributed to an increase in labour productivity and improved capital-labour relations. Construction, where half of the investments in overheating economies were concentrated, also had the greatest impact on the development of the Estonian, Latvian and Lithuanian economies (European Central Bank, 2010, p. 88-89). However, the consequences of the collapse of industrial enterprises in the GIPSIC countries (Greece, Ireland, Portugal, Spain, Italy and Cyprus) and France were different. The biggest decline in industrial production took place in Cyprus by 41%, Greece



by 31%, Spain by 30%, Italy by 23%, France by 16% and Portugal by 11%. In Ireland, industrial production fell only in 2009 and 2012 by around 10% and 5% and returned to pre-crisis level. For the other GIPSIC countries, this situation lasted until 2013 (Sinn, 2014, p. 110-111). The deindustrialisation of the economies reduced opportunities for a faster economic recovery, i.a. by deteriorating export potential and declining labour productivity or lowering its growth. In conclusion, it should be stressed that the new member states have shown greater capacity for post-crisis economic recovery than the southern EU-15 countries.

#### **4. Factors Influencing the Growth and Decline of Investment in the European Union Countries**

Investment is a result of decisions made by private entities and public authorities of countries. Private investment is essential for economic development. Investment may also increase as a result of foreign capital inflows and decrease when the capital is withdrawn. Investment decisions at company level depend on a number of factors, among which the most important are the following: the expected profit rate, the assessment of economic growth prospects and the risk propensity of potential investors. However, we should not overlook factors which are analysed in the second stage of the decision-making process by future investors, i. e. the cost of capital and the general conditions for investment on the domestic market or in other European Union countries. These factors may create a favourable climate for investment or discourage potential investors from undertaking projects stimulating their business activity. These include business environment, access to the production factors, labour and product market flexibility and structural changes in the economy. Improvement of the business environment is still in the spotlight of economic entities and member state authorities. It involves: improvement of law and the public administration system, law enforcement, creation of transparent tax system rules and ensuring stability of principles in business and investment activity.

The decreasing share of industry in the economies of highly developed countries was a specific structural factor influencing the decline in investment since the 1990s, and especially in the 21st century. The economies were dominated by services. However, the reallocation of investment to the service sector is not large enough to be seen as a significant factor of the decline in the EU investment rate. Nevertheless, in some member states, services are more important and the reallocation of investment to this sector has a greater impact on reducing investment in industry (e. g. Belgium, France and Finland) (European Commission, 2017, p. 7-12). Assessing the impact of the reallocation of investments on lowering the investment rate in the EU economies, it is important to take into account the credit boom between 2000 and 2007 that occurred in some EU member states (e. g. Spain and Baltic countries). It caused excessive growth of investment in housing construction. Structural and cyclical factors influenced the level of investment contributing to both their growth and decline. The analysis shows that the latest financial and economic crisis had the greatest impact on the decline in investment in the EU (Table 1). An analysis carried out by the European Commission showed that investment in the EU in 2014 in all selected sectors of the economy was lower than in 2007, except for Industry and Information and Communication. In construction, finance, real estate services and the Public administration, it was even below the 1995 values (European Commission, 2017, p. 8).

There is a lot of economic literature in which authors undertake theoretical and empirical analyses and assessments of various factors influence on the development of investment. The subject of these analyses are usually macroeconomic, microeconomic and structural factors, including the level of regulation of product and labour markets and economic sectors. The

business environment, especially in the EU, is also a very popular research area. Among macroeconomic factors, the following are considered to play a key role in driving investment: expected profit and economic prospects as well as the cost of capital. However, for small and medium-sized enterprises (SMEs), the conditions for raising capital needed to finance investments are very important (European Commission, 2017, p. 15; Banerjee et al., 2015, p. 67-82).

The level of product market regulation and its impact on investment has attracted the interest of economists since the liberalisation of economies in the 1980s and introduction of the Single European Market (including liberalisation of the public service market). A. Alesina, S. Ardagna, G. Nicoletti and F. Schiantarelli (2005, 791-825) analysed: entry barriers, public ownership, market share of the dominant players and price controls in services market in 21 OECD countries from 1975 to 1998. The results of the empirical analysis confirmed that market liberalisation leads to greater investment in the long-run. B. Egert's (2017) research confirmed the conclusions of analysis carried out by Alesina et al. in 2005 on the relationship between product market regulations and investment. B. Egert studied 32 OECD countries, showing that more stringent product and labour market regulations contribute to reducing investment.

Since the mid-1990s, employment policy and the flexibility of labour markets and their multidimensional effects on economies have still remained important research issues. Researches focused mainly on the effects of employment restrictions (employment protection legislation - EPL) associated with labour productivity. Furthermore, S. Laporsek and I. Stubelj (2012, p. 138-152) examined the relationship between EPL regulations and profits in 18 European countries in 1998 - 2008 using regression analysis. The result of the analysis shows that strict EPL has a negative impact on profit and authors suggest deepening the study in order to gain more knowledge about the relationship between employment protection and possible causality with profits, indicating interactions between profits and investments.

The impact of the labour markets on the economic performance from institutional approach, especially on total factor productivity is assessed by P. Čekmeová (2016, p. 116 – 123). The results of her empirical analysis suggest a significantly negative effect of trade unions, unemployment benefits and minimum wages on the growth rate of total factor productivity in 1995-2013. On the contrary, employment protection legislation indicates a significant positive impact.

Continuing the analysis of relations between employment protection and companies' and countries' economic outputs, it is worth noting the work of F. Cingano et al. (2010, p. 117-163), in which authors analysed the joint effect of EPL on investment, capital-labour substitution, labour productivity and jobs reallocation between countries. The results were as follows: EPL reduces all of them in high reallocation sectors relative to low reallocation sectors. An average effect of EPL on capital per worker was around -12%, investment per worker - 6,8% and labour productivity - 8,6%.

Finally, this leads us to the question: Which factors have the greatest influence on persistent low investment in the EU countries? The European Commission (2017) and the European Central Bank (2016) surveys show that these are mainly: cost of capital, corporate debt and non-performing loans, weak demand, uncertainty of expected profits and structural factors such as high regulation in product and labour markets. Member states still vary significantly in terms of the quality of business regulations and public administration, which also has an impact on investment.

## 5. Conclusion

According to the theoretical part of the analysis, we find a convincing argument in literature that investment is a prerequisite for economic growth in the medium and long term. The empirical analysis of economic growth in the European Union after crisis 2008-2009 shows a large EU investment gap, which deepened in the years 2009 - 2013 and a low rate of investment growth, when domestic economies, with a significant delay compared to the US, entered the economic recovery stage (from 2014).

At the current stage of the business cycle in the EU, the most important objective is to remove barriers hindering investment growth. In particular, these barriers are macroeconomic, structural and resulting from a low quality of the business environment. The following factors have the greatest impact on the low propensity of economic entities to invest: 1) pessimistic assessments of future profits and uncertainty concerning economic prospects, 2) increase in capital costs and more difficult access to credit, 3) companies' debt and non-performing loans, 4) highly regulated product and labour markets and sectoral entry barriers, 5) too low quality of business environment, 6) delays in implementing structural reforms. The risk of secular stagnation continues to exist because the investment rate still remains low.

## References

- [1] Alesina, A., Ardagna, S., Nicoletti, G. and Schiantarelli, F. (2005). Regulations and investment. *Journal of the European Economic Association*, vol. 3(4), pp. 791-825.
- [2] AMECO (2018). *Database* [online]. [cit.2018-02-23]. Available at: [http://ec.europa.eu/economy\\_finance/ameco/user/serie/SelectSerie.cfm](http://ec.europa.eu/economy_finance/ameco/user/serie/SelectSerie.cfm).
- [3] Banerjee, R., Kearns, J. and Lombardi, M. (2015). (Why) Is Investment Weak?. *BIS Quarterly Review*, March 2015, pp. 67-82.
- [4] Barro, R.J. (1990). *Macroeconomic*. New York: John Wiley&Sons, INC.
- [5] Brown, A.C. (1989). Alvin Hansen's Contribution to Business Cycle Analysis. *Massachusetts Institute of Technology, Department of Economics Working Paper*, no. 515, pp. 1-10.
- [6] Čekmeová, P. (2016). Productivity in the European Union: Do Labour Market Institutions Really Matter?. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 116 – 123.
- [7] Cingano, F., Leonardi, M., Messina, J. and Pica, G. (2010). The Effects of Employment Protection Legislation and Financial Market Imperfections on Investment: Evidence from Firm-Level Panel of EU Countries. *Economic Policy*, January 2010, pp. 117-163.
- [8] Egert, B. (2017). Regulations, Institutions and Aggregated Investment: New Evidence from OECD countries. *OECD Economics Department Working Papers*, No. 1392.
- [9] European Central Bank (2010). The Impact of the Financial Crisis on the Central and Eastern European Countries. *Monthly Bulletin*, July 2010.
- [10] European Central Bank (2016). Business developments in the euro area since the crises. *Economic Bulletin*, no 7.

- [11] European Commission (2004). EMU after five years. *European Economy*. Special Report No 1.
- [12] European Commission (2017). Investment in the EU Member States. *European Economy*. Institutional Paper 062/October 2017.
- [13] European Commission (2018). Report on Public Finances in EMU 2017. *European Economy*, Institutional Paper 069, January 2018.
- [14] Laporsek, S. and Stubelj, I. (2012). Employment Protection Legislations and Profits: Evidence from European Countries. *Transylvanian Review of Administrative Sciences*, No 35E/212, pp. 138-152.
- [15] Mucha-Leszko, B. (2013). Hiszpania w unii walutowej - czynniki rozwoju, przyczyny problemów gospodarczych i procesy dostosowawcze. *Annales UMCS, Sectio H: Oeconomia*, vol. XLVII, 1, pp. 107-120.
- [16] Mucha-Leszko, B. (2016). Przyczyny słabego ożywienia koniunktury gospodarczej w strefie euro w świetle hipotezy o nowej sekularnej stagnacji. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu. Oeconomia*, nr 449, pp. 436-449.
- [17] Mucha-Leszko, B. and Twarowska, K. (2016). The European Union as a Global Economic Power. *Comparative Economic Research*, vol. 19, no 3, pp. 27-44.
- [18] Peterson, W.C. (1988). *Income, Employment and Economic Growth*. New York, London: W.W. Norton&Company.
- [19] Pichelman, K. (2015). When "Secular Stagnation" meets Piketty's capitalism in the 21st century. Growth and inequality trends in Europe reconsidered. *European Economy*, Economic Papers 551/June.
- [20] Sinn, H-W. (2014). *The Euro Trap*. Oxford University Press.
- [21] Solow, R. (1957). Technical Change and the Aggregate Production Function. *The Review of Economics and Statistics*, vol. 39, no. 3, pp. 312-320.
- [22] Summers, L. (2015). *The Economist explains: What it means to suffer from secular stagnation. March 8<sup>th</sup> 2015* [online]. [cit.2018-02-26]. Available at: <https://www.economist.com/blogs/economist-explains/2015/03/economist-explains-4>.
- [23] Taylor, T. (2013). *Secular Stagnation: Back to Alvin Hansen* [online]. [cit.2018-02-26]. Available at: <http://conversableeconomist.blogspot.com/2013/12/secular-stagnation-back-to-alvin-hanson.html>.
- [24] The Conference Board (2018). *The Conference Board Total Economy Database™, November 2017* [online]. [cit.2018-02-23] Available at: <https://www.conference-board.org/data/economydatabase/index.cfm?id=27762>.

## European Governance – Reflection and Future

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### **Abstract**

*The article analyzes the current shortcomings and possibilities of developing a European governance mechanism. The European Union based on the Treaty of Lisbon needs to undergo a thorough revision to become more resilient in the difficult tests that it has to undergo. In the current decade, a period of extraordinary uncertainty has begun, which in its consequences may lead to the strengthening of secessionist tendencies in Europe, including the possible disintegration of the European Union. All proposed institutional reform represent a significant shift in the functioning of the European Union from the legislation enshrined in the Lisbon Treaty. Individual proposals reinforce the transnational character of the European Union and, at the same time, lead to changes in the interinstitutional arrangement. The current situation requires not only the reflection of the current developments of the part of the Union institutions but, in particular, the identification of the starting points and solutions by the Member States themselves.*

**Keywords:** *decision making, disintegration, European Union, governance mechanism, institutional reform*

**JEL Classification:** *E61, F02, F15*

### **1. Introduction**

The European Union (EU) is undergoing the most important transition since the beginning of the integration process. The Member States during this long period began to differ in many aspects more and more. Several factors of various nature and provenance have converged to challenge the goals, structures and equilibria of integration, thus requiring political and institutional responses from the Union. In many countries, public frustration, in particular where they cannot meet the challenges of globalization, is manifested.

The Member States currently are diverse especially in terms of economic wealth. The recent crisis has contributed to exacerbate the EU's longstanding democratic deficit. The EU institutions are seen as outright hostile and in the hands of unaccountable technocrats and EU officials – if not the big member countries. This type of diversity often leads to disagreements between net contributors to, and recipients from the EU budget. The EU leaders also disagreed on the relative priority that should be given to different policy areas.

As Kubicek (2017) says the EU's ability to resolve controversy was also tested by the enlargements that influenced the EU's capacity to act. The new members differ markedly from the old in terms of their recent historical experience and levels of economic development. The Member States also differ from one another in styles of national regulation. The way in which decisions has been taken is also the subject of controversy. The decision-making process has been often criticized for being undemocratic. Instead of bringing the Member States together

on European values and promoting the idea of European belonging, many apply eurosceptic populism and worrisome revival of nationalist sentiments in several Member States.

Internal problems are compounded by a number of external challenges (Russian annexation of Crimea, war in Syria, illegal immigration and refugee management in many member countries, political instability in almost the entire eastern and southern Mediterranean region, but also in many ways the unpredictability of the US administration policy). The Member States have a different opinion on some of these external issues, leading to fragmentation of the EU. As Fojtíková (2016) says, the separatist tendencies in the European Union can have a negative impact on the EU's external relations, for example at the EU's talks with China and other partners on a comprehensive investment agreements.

These are just some of the most visible problems currently facing the European Union. This social and political disintegration requires a discursive as well as institutional response from European leaders.

## **2. Intergovernmental Versus Supranational Mechanisms in the Area of Governance – Institutional Changes**

The European Union has a complex governing structures but it is not the government of individual states. Its structures blend together elements of intergovernmentalism, in which states are represented and their interests are given primary consideration, and supranationalism, which empowers EU structures and citizens directly, bypassing national governments. Many of acrimonious debates within the EU revolve around the question of whether its supranational or intergovernmental elements should guide policy (Kubicek, 2017).

It could be said that all political systems contain tensions between principles and practices, between the ideals and the realities of governance. This is true even in the case of the European Union. The result is that the more members there are in the Union, the more difficult it becomes to reach consensus on various topics, and the less likely it is that all would advance at the same pace in various fields. Many politicians believe that the path of this situation becomes the concept of a multi-speed or other concept of differently structured European integration. The current stagnation or crisis of the European integration process is a threat to Europe's future, because the acquis achieved could be gradually dismantled. It is a widely spread view (Vai, L. and Tortola, P., D., 2017) that the crisis has strengthened intergovernmentalism in the EU at the expense of supranational aspects. As examples, European Fiscal Compact (the *Treaty on Stability, Coordination and Governance in the Economic and Monetary Union* is the intergovernmental treaty introduced as a new stricter version of the Stability and Growth Pact, signed on 2 March 2012 by all Member States of the European Union), and the European Stability Mechanism (an intergovernmental organization established on 27 September 2012 and located in Luxembourg City, which operates under public international law for all Euroarea Member States having ratified a special intergovernmental treaty) can be used. New intergovernmentalism (Schmidt, 2017) is taking place in areas in which the European Union has recently acquired more powers compared to the past. Bickerton et al. (2015) call it as an integration paradox.

Alongside the establishment or reinforcement of intergovernmental mechanisms in the area of macroeconomic governance, recently we have witnessed an equally important strengthening of supranational institutions especially of the European Commission and the European Parliament:

- This was reflected in the selection of the candidate for the post of President of the European Commission. This process, referred to as the concept of top candidates (also called *Spitzenkandidaten* from German language) nominated by European political parties based on the outcome of the European Parliament elections, first applied in 2014. The result is a marked politicization of the work of the European Commission. This has reduced the role of the European Council in favor of the European Parliament. The European Commission thus loses its impartiality in guarding the Treaties and in seeking compromises between Member States. The strategic direction of the EU is thus transferred to the European Commission instead of staying on the shoulders of the European Council, representing national governments. The European Council has to stay the quintessential intergovernmental body also for future. This has affected the institutional balance that has existed until then. The permanent anchoring of this concept, which has not been formalized in the Treaties, is undesirable for a number of Member States (especially for smaller countries with shorter memberships in the EU such as the Czech Republic). These issues were discussed at the Round Table of the Czech National Convention on the EU on 16 February 2018, with the participation of government representatives, Parliament deputies, interest groups and unions as well as the academic sphere.
- Another outstanding issue is the number of seats in the European Parliament following the departure of the United Kingdom from the European Union in 2019. No permanent mechanism has been put in place to allocate mandates to individual Member States. The number of seats allocated to each country has been set ad hoc before all European Parliament elections. Part of the Member States promotes to make at least part of the loose UK mandate to create supranational candidates compiled by individual political parties at European level. However, these parties have not yet been sufficiently established and understandable for voters.
- The current debate on reforming the institutional set-up of the European Union also contains a number of other ideas. These include consideration of the merger of the positions of the President of the European Council and the European Commission President, as well as pressure to rationalize the functioning of the European institutions. The merging of the functions of the Presidents of the two mutually balancing institutions is a step towards centralization of the decision-making process and towards the weakening of the role of the European Council representing national interests. This proposal does not take into account the functional diversity and autonomous role of both institutions in the decision-making process, which is clearly enshrined in primary EU law.
- Similarly, the institutional balance is also undermined by another proposal to establish the post of European Economy and Finance Minister. It would actually merge two separate positions: the Vice-President of the European Commission and the President of the Eurogroup.
- Among the proposals that have been repeatedly debated with a view to streamlining the functioning and internal organization of the European Commission are the possibility of reducing the number of European Commissioners. The proposed reduction in the number of members of the European Commission could give rise to disputes over the form of the rotation principle on the basis of which Member States could nominate their representative.

- Also, the proposal for the creation of the European Monetary Fund, as a successor to the European stabilization mechanism (ESM), may be faced with the need to change primary legislation. The European Stability Mechanism is an intergovernmental organization located in Luxembourg, which operates under public international law for all eurozone Member States having ratified a special ESM intergovernmental treaty (established on 27 September 2012 as a permanent firewall for the euroarea, to safeguard and provide instant access to financial assistance programmes for Member States of the euroarea in financial difficulty).

Any proposed institutional change would, in view of its nature, trigger the need to revise the basic legal framework, such as the Treaty on European Union. These changes were legitimized by the need to subject them to national ratification processes.

### **3. Decision-Making Procedures - Extension of Qualified Majority Voting in the EU Council**

Among all the EU institutions, the Council of the EU is the most authoritative, as it is the institution that is most empowered to decide what the EU should and should not do. But the EU Council is not a single body. Rather it is more like collection of specialist sub committees, whose composition changes depending upon the issue at hand. In other words, the EU Council is not a single council but it is a series of issue-specific councils, and it meets in ten different forms about ninety times a year (Kubicek, 2017).

The EU Council takes decisions on proposed legislation. In the early period of European integration decisions had to be unanimous which could cripple the decision-making capacity of the EU. Therefore the European Union adopted a qualified-majority voting (QMV). Since March 2017 QMV has the form of double majority – 55 % of the states representing 65 % of the EU citizens. One could argue that use of QMV facilitates decision-making especially in the enlarged European Union. Nonetheless, there are still some areas that require unanimity. These issues are considered more sensitive to concerns about sovereignty, and thus by requiring unanimity, each Member State retains a veto over EU policy. This voting system used by the EU Council combines inter-governmentalism with supranationalism.

As with much in the EU, the push has been, over time, toward more supranationalism that would take away the power of any individual member state. For instance by a weakening of decision-making processes by more frequent use of the bridging clause - the so-called passerelle clause. Activating a passerelle clause still depends on a decision being adopted unanimously by the EU Council or by the European Council. Thus, in every case, all European Union countries must be in agreement before such a clause may be activated.

The existence of this institute (in which the legislative procedure used for a certain policy area can be changed without formally amending the treaties) is justified in primary law and is one of the options to allow for a more flexible decision-making process. Unlike formal treaty revision their use does not require national ratification. Passerelle clauses allow derogation from the legislative procedures initially provided for by the treaties. Specifically, and under certain conditions, they make it possible:

- to switch from the special legislative procedure to the ordinary legislative procedure in order to adopt an act in a given policy area;
- to switch from voting in the EU Council by unanimity to qualified majority voting in a given policy area.



Proposals for more frequent use of this clause, in addition to exceptional ad hoc situations, can bring a number of negative risks and weaken its influence in taking key decisions at the EU Council level. Also in this way, the fragile balance between the various EU institutions could be disrupted.

Tomášek (2018) who published the expert opinion for the Round Table of the Czech National Convention on February 16<sup>th</sup>, 2018 believes that support for the proposed extension of qualified majority voting in other areas of the internal market or foreign, security and defence policy must be very prudent. In the area of the internal market, this is true in most cases. It is expected that the proposal will be extended to qualified majority voting in the areas of the energy mix, some parts of social policy (such as the protection of workers upon termination of the contract, the collective protection of the interests of workers and employers, or the conditions for the employment of legal immigrants from third countries) and taxation.

Bartovic (who is the director of the Institute for European Policy Europeum in Prague) and Kasáková (2018) sees considerable risk especially from the possible harmonization of direct taxes, which could jeopardize the competitiveness of the Czech economy. Greater ambiguity also exists in the area of foreign policy and security. This is a sensitive area where the European Union creates a common position only where there is a consensus among all Member States. The Council may already vote by qualified majority on certain partial questions and there is de facto a right of veto in each of the Member States of the Union in accordance with Article 31 (2) of the EU Treaty.

Negative historical experience is related to the introduction of qualified majority voting on asylum and migration. The Czech Republic together with Hungary and Poland consequently faces the European Commission's action before the EU Court. In addition, the transition from unanimity to qualified majority voting in the Czech Republic and other countries is subject to the approval of the two chambers of the national parliament, which, to a certain extent, legitimizes this process but also makes it considerably more difficult.

#### **4. Conclusion**

All the institutional changes discussed represent a significant shift in the functioning of the European Union from the legislation enshrined in the Lisbon Treaty. Individual proposals reinforce the transnational character of the European Union and, at the same time, lead to changes in the interinstitutional arrangement, which should, however, guarantee a balance between EU institutions in the future. The debate on the appropriate setting of the institutional framework for the functioning of the European Union is crucial for the further direction of European integration and its perception by citizens of the Member States.

To make the European Union governance really workable the institutional decision making rules also require revision. The European Union needs greater legitimacy. This means also better procedural quality by being more open and accountable. Therefore is necessary to stop the centralization of the decision-making process and the weakening of the European Council role representing national interests. Together with Majone (1996) we can argue that the European Union should remain a technocratic, regulatory state that should focus on adopting policies to foster more effective and efficient international cooperation.

It also needs more extensive citizen participation and representation. Greater decentralisation of policy-making could help ensure greater direct involvement of citizens. This more direct citizen access is necessary through better opening to public interest groups via pluralist

processes. Also national parliaments would need to be better integrated into the policy-making process. The EU governance can become more effective and legitimate by bringing the people into governance processes as at the Union level as at the national level. The European Union will thus have a greater chance of solving the current crisis-related problems that have led citizens to move away from traditional parties in favor of populist movements.

Another debate on the appropriate setting of the institutional framework for the functioning of the European Union is crucial for further direction European integration and its perception by the EU citizens.

### **References**

- [1] Bartovic, V. and Kasáková, Z. (2018). Institucionální reforma EU v kontextu současné debaty. *Working Paper of Europeum Institute for European Policy*. Praha: EUROPEUM Series.
- [2] Bickerton, Ch., J., Hodson, D. and Puetter, U. (2015). The New Intergovernmentalism: European Integration in the Post-Maastricht Era. *Journal of Common Market Studies*, Vol. 53, No. 4 (July 2015), pp. 703–722.
- [3] Fojtíková, L. (2016). China-EU Investment Relations: Towards a New Institutional Framework. In *Proceedings of 14<sup>th</sup> International Scientific Conference: Economic Policy in the European Union Member Countries, PTS 1 and PTS 2*. Opava: Silesian University, pp. 144–155.
- [4] Kubicek, P. (2017). *European Politics*. London: Routledge.
- [5] Majone, G. (1996). *Regulating Europe*. London: Routledge.
- [6] Schmidt, V. A. (2017). The New EU Governance. New Intergovernmentalism, New Supranationalism, and New Parliamentarism. In Vai, L., Tortola, P., D. and Pirozzi, M. (eds., 2017). *Governing Europe*. Brussels: P.I.E. Peter Lang, pp. 33-48.
- [7] Tomášek, M. (2018). Stanovisko k tématu Institucionální reforma EU v kontextu současné debaty. *Working Paper*. Praha, Univerzita Karlova.
- [8] Vai, L., Tortola, P., D. and Pirozzi, M. (eds., 2017). *Governing Europe*. Brussels: P.I.E. Peter Lang.

## Should the EU Reject China's Market Economy Status? Empirical Evidence

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### **Abstract**

*Granting Market Economy Status for China will surely pose significant impact on China's prestige and trade with the EU. Such decision, however, must be made based on discussion, among other, on broad aspect of China's issues on trade practices such as state interference in the market, corporate governance, equal treatment of companies and banking sector. Whereas aspects of these issues are quite broad, in this paper we focus mainly on state interference in the market by presenting an empirical evidence based on Kornai's theory of soft budget constraint. The aim of this paper is to show an evidence of soft taxation and soft credit practices present in Chinese economy by using various mathematical and statistical methods as well as methods to verify accuracy of our hypotheses and applied techniques.*

**Keywords:** *China, European Union, market economy status, soft budget constraint, state interference*

**JEL Classification:** *F13, F38, G30*

### **1. Introduction**

Granting China's Market Economy Status (MES) will undoubtedly have huge impact on EU-China trade as well as World-China trade. As part of its integration into the global economy, China became a member of the World Trade Organization (WTO) on 11 December 2001. Certain provisions of China's WTO Accession Protocol which deal with the issue of dumping, had expired on 11 December 2016. Under the EU legislation, dumping occurs when a company exports its products to the EU at a price lower than the "normal value" (domestic prices of the product or the cost of production) in its own domestic market. Yet the simple expiration of this condition does not mean that WTO member countries must grant China Market Economy Status if they have not already done so. In this paper we focus on two empirical evidences of China's government interference to the market as an argument that China yet still employ some practices that must be undone on its path towards MES – soft taxation and soft credit as were defined in Kornai's theory of soft budget constraint.

### **2. EU-China Relations and the Impact of Granting MES**

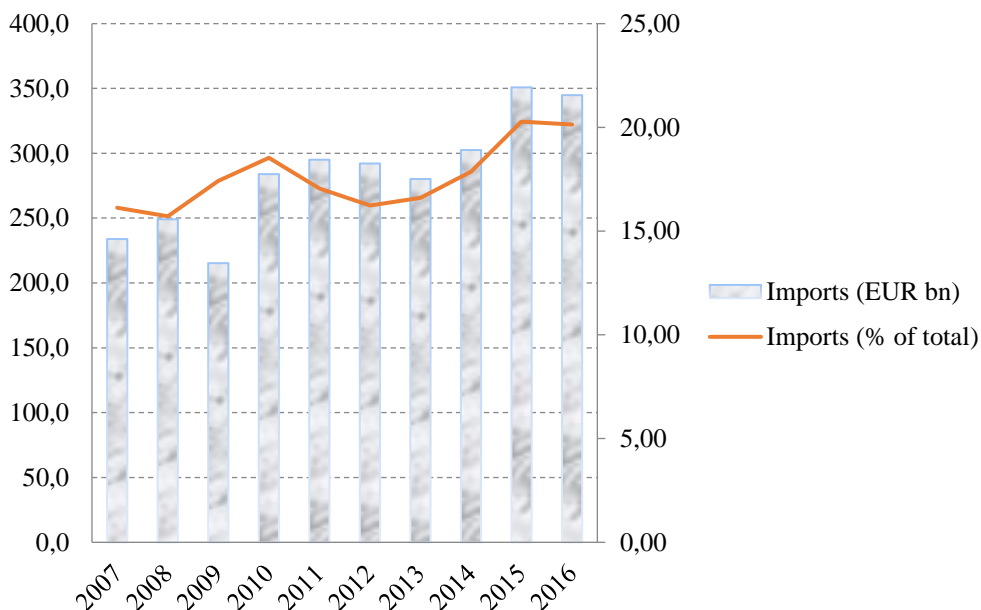
In recent years, EU-China relations have achieved a high degree of institutionalization. However, the EU's commercial and political interests are different from Chinese. In terms of trade and commerce the major interest of the EU is to press China to fulfill the WTO obligations, and protect its trade and investment in China. The EU would like to deal with trade deficit, export restrictions on raw materials, exchange rates, market access, intellectual

property rights, service, investment, subsidies, government procurement, norms and standards. In regards the political dimension, there are also some very sensitive issues regarding democracy, human rights, the rule of law, Taiwan, the arms embargo, non-proliferation, disarmament, and the International Criminal Court. The EU also links trade with political matters of human rights and democracy (Cihelková, Nguyen, Woźniaková and Straková, 2017). All of these issues do not belong to China's priorities; China approaches them with limits and with different emphasis. In particular, China deal with EU's anti-dumping measures, anti-subsidy, safeguards, technical barrier to trade and other restrictions. Especially China aims to obtain the EU Market Economy Status and elimination of the arms embargo (Cihelková and Nguyen, 2016).

Since joining World Trade Organization in 2001, China benefited significantly from Trade agreements negotiated with WTO members and also contributed to a bigger openness of the Chinese economy (Fojtíková, 2016). Moreover, WTO accession helped China to move towards liberalization in many aspects (Fojtíková, 2012). Nevertheless, its accession agreement contained certain measures that China has to follow in a process of liberalization of its economy. WTO members that refuse to grant China Market Economy Status were allowed to choose the methodology for calculating the reference price used in anti-dumping cases. Dumping occurs when a company exports a product at a lower price than its normal value, i.e. the price used "in the normal course of trade, for a like product destined to be consumed in the exporting country" (WTO, 1994). Article 15 (a) (ii) of China's WTO Accession Protocol gave WTO members this possibility. It stipulates that "The importing WTO Member may use a methodology that is not based on a strict comparison with domestic prices or costs in China if the producers under investigation cannot clearly show that market economy conditions prevail in the industry producing the like product with regard to manufacture, production and sale of that product."

Nonetheless, the expiration of the article in 11 December 2016 did not resulted in instant granting of China's MES, if WTO members have not already done so. These countries that are reluctant to grant MES must review and propose new anti-dumping measures. In the case of the EU, according to European Commission statistics and Eurostat in 2016, China is EU's biggest trading partner, in term of import from China, with a volume of 344,8 billion dollars which represent for 20.14% share (EC, Nov 2017) (Figure 1), increase from roughly 10% of total 15 years ago (PNB PARIBAS, Jan 2017). Moreover, according to European Parliament report analysis China is one of the primary targets of EU's anti-dumping measures. Chinese exports to the EU were the target of 119 investigations and 85 measures between 1995 and 2014 (EP, Nov 2015).

As a consequence, the impact of granting MES would surely have significant impact on China-EU trade; as such existing ones would no longer be applicable on current terms. Nevertheless, the EU is willing to grant China's MES, if its further reform meets five criteria defined by the European Commission for a country to obtain Market Economy Status (EC, Nov 2002) (EP, Nov 2015). It is about: (1) A low degree of government influence in the allocation of resources and in decisions of enterprises, whether directly or indirectly (e.g. public bodies), for example through the use of state-fixed prices, or discrimination in the tax, trade or currency regimes. (2) An absence of distortion in the operation of the privatised economy. (3) The effective implementation of company law with adequate corporate governance rules. (4) Effective legal framework for the conduct of business and proper functioning of a free-market economy (including intellectual property rights, bankruptcy laws, etc.). (5) The existence of a genuine financial sector which operates independently from the state and which in law and practice is subject to sufficient guarantee provisions and adequate supervision.

**Figure 1: EU Imports from China**

Source: Eurostat (2017)

In this paper we, address China's practices does not meet (1) and (5) criteria in term of soft taxes and soft credit by applying Kornai's theory of soft budget constraint.

### 3. Soft Budget Constraint

Theoretically speaking, soft budget constraint is a form of state intervention into microeconomics. The concept of a soft budget constraint was formulated by Janos Kornai during the period of Hungarian market socialism, when it was common for the state to financially save the state owned enterprises (SOEs) from financial difficulties, regardless of whether the difficulties were due to their own fault or external factors. Of course, saving the failing SOEs is just the first reason. The second is to support the growth of SOEs, whose growth would be slow, if they relied only on own resources and profits. The opposite of the soft budget constraint, as defined by Kornai (1979, 1980), is hard budget constraint, which is a common market environment where budget constraints are set for the whole economy uniformly, and individual firms have no access to state benefits.

Furthermore, soft budget constraints may occur in several forms. First, soft subsidies provided by national or local governments. The subsidy is soft, if it is tradable, it is subject to bargaining, lobbying, etc. The subsidy is adjusted to exceed past, current or future costs. Second form is soft taxation. The soft definition in this case does not apply to the rate of taxation. Even with a low tax rate, the tax system can be hard if the tax rates are set uniformly, long-fixed and strictly levied. On the other hand, taxation is soft, even with a high tax rate, if the rules are negotiable, subject to political pressure. In other words, tax rates are not uniform, but are almost tailored to the financial situation of different sectors or regions, or to different forms of ownership. Compliance with tax obligations is not strict; there are leaks, ad hoc exceptions,

delays, etc. The third is a soft loan or a soft credit. Again, the softness does not refer to the interest rate. The credit system can be difficult even at a low interest rate (assuming that the credit market creates a low interest rate) if strictly enforcing the credit conditions that apply to all equally. The lender borrows money that awaits discipline in debt service and not to help ill-managed companies that will not be able to repay their debt. The implementation of the credit agreement stay unchanged; severe sanctions in the event of insolvency, including forced administration, bankruptcy, forced merger, sale or other similar legal remedies. On the other hand, the credit system can be soft even with high interest rates when the credit agreement is not fulfilled, unreliable debt service is tolerated and postponing repayment schedule is tolerated. The soft loan is used to help firms with big and chronic financial difficulties, without real hope of repaying the debt. Fourth is soft administrative prices. This can be applied if the price is not fixed by the seller and the buyer under the contract but by some bureaucratic institution. The administrative cost is difficult if it limits expenditure and automatically does not change the cost. The administrative price is soft if it is set according to the allowed “extra cost” principle, which automatically adjusts costs by cost (Kornai, 1979, 1980).

#### 4. Data

Most of the data will be retrieved from China’s statistical yearbook published by the National Bureau of Statistics of China, which includes statistics for “industrial enterprises above a certain size”. The data come from 2006 to 2015. We consider 2006 to be the beginning of the shaping of current reforms that are still ongoing and impact today, namely Property Law of the People’s Republic of China in 2007 and the beginning of a new phenomenon at the beginning of 2008, “The state advances, the private sector retreat” (国进民退). The data includes statistics for companies of a certain size, namely those enterprises whose income from the principal business is over 5 million yuan. These aggregated data are collected “mainly on the basis of relevant data in the annual reports on industrial statistics”. This data is a source of recent researches from recognized economists, including Lardy (2014).

For the purpose of research, we use data aggregated for 38 industries in the Chinese economy, which include more than 350,000 enterprises. Our research will mainly be based on industry-specific data (figures are quoted in integers and sums are aggregated at 100 million yuan): the total number of enterprises and the number of loss-making enterprises to identify developments in the sector; the amount paid on interest, total liabilities, short-term liabilities and long-term liabilities to calculate the interest rate; income from the principal business and taxes paid to determine the tax burden. These data will be examined and compared mainly among the three main ownership structures: First, state-owned and state-controlled enterprises. Secondly, privately owned enterprises are enterprises with Chinese privately owned capital. Thirdly, foreign-owned enterprises, including all foreign capital companies including Hong Kong, Makao, and Taiwan.

For the purpose of completeness and accuracy of data usage from the National Bureau of Statistics of China, we shall provide the definitions according to which the Bureau classifies the collected data (National Bureau of Statistics of China):

1. First, state-owned enterprises refers to industrial enterprises where the means of production or income are owned by the state. Joint state-private industries and private industries, which existed before 1957, have been transformed into state industries. Statistics on these enterprises has been included in the state-owned industries since 1957 when separation of data was no longer necessary.

2. Second, collective-owned enterprises refers to industrial enterprises where the means of production are owned collectively, including urban and rural enterprises invested by collectives and some enterprises which were formerly owned privately but have been registered in industrial and commercial administration agency as collective units through raising fund from the public.
3. Third, share-holding corporations refer to economic units registered in accordance with the regulation of the People's Republic of China on the Management of Registration of Corporate enterprises, with total registered capitals divided into equal shares and raised through issuing stocks. Each investor bears limited liability to the corporation depending on the holding of shares, and the corporation bears liability to its debt to the maximum of its total assets.
4. Fourth, enterprises with funds from Hong Kong, Macao and Taiwan refers to all industrial enterprises registered as the joint-venture, cooperative, sole (exclusive) investment industrial enterprises and limited liability corporations with funds from Hong Kong, Macao and Taiwan.
5. Fifth, foreign funded enterprises refers to all industrial enterprises registered as the joint-venture, cooperative, sole (exclusive) investment industrial enterprises and limited liability corporations with foreign funds.

## 5. Methods of Analysis

For a purpose of analysis we will employ following formulas to verify soft budget constrain, where will compare differences between SOEs and privately owned enterprises (POEs).

In the case of soft taxes, we will use the tax contribution formula, which is used by the National Bureau of Statistics of China for the contribution of enterprises. The formula is as follows:

$$\text{aggregate tax contribution} = \frac{\text{aggregate tax paid}}{\text{aggregate assets}} \times 100\%, \quad (1)$$

where aggregate taxes paid represent the aggregate of taxes paid across the industry, and aggregate assets represent the sum of all assets in the sector. Both variables are expressed in absolute values (in our case at 100 million yuan). The result is in percent. As we can see, the formula we have defined, takes into account aggregate assets rather than aggregate profits. Due to research by various authors such as Lardy (2014) who noted that Chinese SOEs are sluggish and inefficient giants, looking at their profits would not have to provide an objective view of the tax burden on SOEs. At the same time, Lardy (2014) in his research shows that the average margins in the state and non-state sectors are almost the same, i.e. 5.8 percent for the state and 5.6 percent for the non-state enterprises. In addition, the profit margins of the two types of firms are virtually indistinguishable in the past few years (ibid). Assuming the same margin, the formula we have set for the rate of tax contribution would be a better indicator.

In term of soft credit, we will be analyzing aggregate interest rate in following formula:

$$\text{aggregate interest rate} = \frac{\text{aggregate interest paid}}{\text{aggregate long-term liabilities}} \times 100\%, \quad (2)$$

where long-term liabilities are liabilities under which market interest rates would be payable by businesses and relate to the total debt due within one or more years, including long-term loans, payables, long-term liabilities. Both variables are expressed in absolute values (in our case at 100 million yuan). The result will be in percentage. To verify our choice of methodology we will also examine relationship between our results and People's Bank of China (Central bank) by regression and correlation analysis.

Correlation is the degree of dependence between two or more variables. Variables must at least be measured on an interval scale, but there are other types of correlation coefficients that work with other types of data. The correlation coefficient can range from  $-1$  to  $+1$ . The  $-1$  value represents the highest negative and  $+1$  the highest positive correlation. Value  $0$  denotes no correlation. In our work, we will most benefit from a linear correlation called Pearson's  $r$  that is used if the variables are measured at least on the interval scale. The correlation coefficient does not depend on the scale at which the variables were measured. We can manually correlate height with weight, expressed either in centimeters and kilograms, or in inches and pounds. Formula for correlation coefficient:

$$r = \frac{\sum XY - n\bar{X}\bar{Y}}{\sqrt{\sum X^2 - n\bar{X}^2} \sqrt{\sum Y^2 - n\bar{Y}^2}} \quad (3)$$

The correlation coefficient  $r$  may have a value between  $-1$  and  $1$ , where  $r$  is close to  $1$  will be a direct dependence, otherwise if  $r$  approaches  $-1$  it will be an indirect dependence. To interpret the  $r$  coefficient we will consider  $r < 0.3$  for low dependence;  $0.3 \leq r < 0.5$  for moderate dependence;  $0.5 \leq r < 0.7$  after significant dependence;  $0.7 \leq r < 0.9$  for high dependence;  $r \geq 0.9$  for very high dependence.

## 6. Empirical Evidence

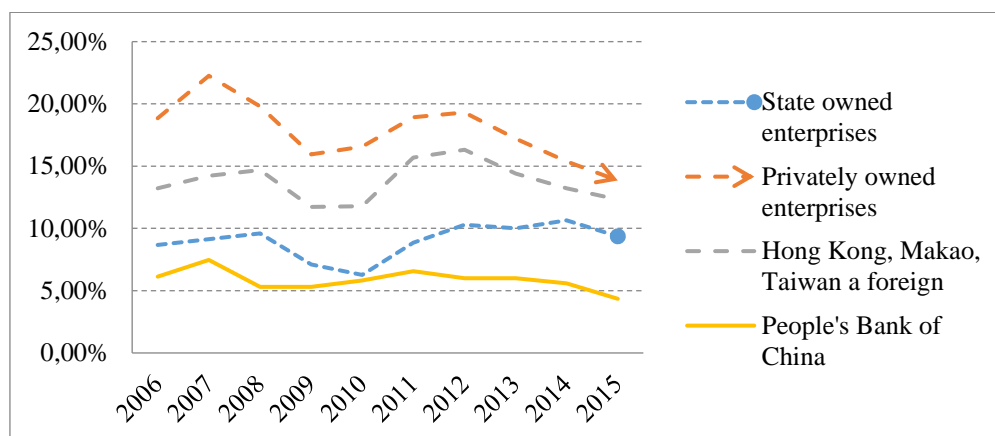
In this section we will analyze applied quantitative methods based on data from the National Bureau of Statistics of China.

As we can see in Figure 2, the highest interest is paid by privately owned businesses. On the contrary, the lowest interest rates are paid by SOEs and the rate for foreign companies is positioned between the former two.

For a purpose of comparison, we have also highlighted the interest rate indicated by the central bank, which represents the basic interest in the market economy from which the other interest rates of the financial institutions are derived. Since the central bank's interest rate is basic rate set for the entire economy, it is placed at the lowest in the chart, below the aggregate interest rate of the SOEs, which confirms that our calculations are correct. Of course, the graphical analysis of the chart itself cannot give us a complete picture of how the state administers in the case of interest rate restrictions. Therefore, if we look at the data in more detail, we see in Table 1 that the interest rate for SOEs is on average 9%, with private companies paying almost double, 17.81%, on the other hand foreign companies pay an average of 13.76%, which is approximately one and a half times that of SOEs.

We now need to verify the accuracy of our results. Using the correlation method, we compare the central bank's interest with the interest we have calculated. Based on our calculations (Table 1), we can see that the strongest relationship is between the interest rate for privately-owned corporations, which is 0.81, which is a very strong dependence, which could be assumed, since interest for private enterprises is determined by the market, and which rise from the rate of interest set by the central bank. On the contrary, in the case of SOEs, the correlation is 0.02, which means very low dependence between interest for SOEs and interest rate determined by the central bank. The reason is a strong negotiating position resulting from the nature of SOEs. As far as foreign-owned enterprises are concerned, the correlation is 0.46, which is a slight correlation, which corresponds to our assumption, as foreign capital enterprises are not only dependent on national funding but can also obtain cheaper loans from abroad.



**Figure 2: Aggregate Interest Rate by Ownership 2006–2015 (%)**

Source: Author's calculations

The analysis of interest rates in the Chinese industry, described above, and the subsequent verification of the results, confirms us that the methodology we have chosen is correct and therefore, according to our theoretical knowledge, we can safely assume that there is a soft budget constraint in the Chinese system – soft credit.

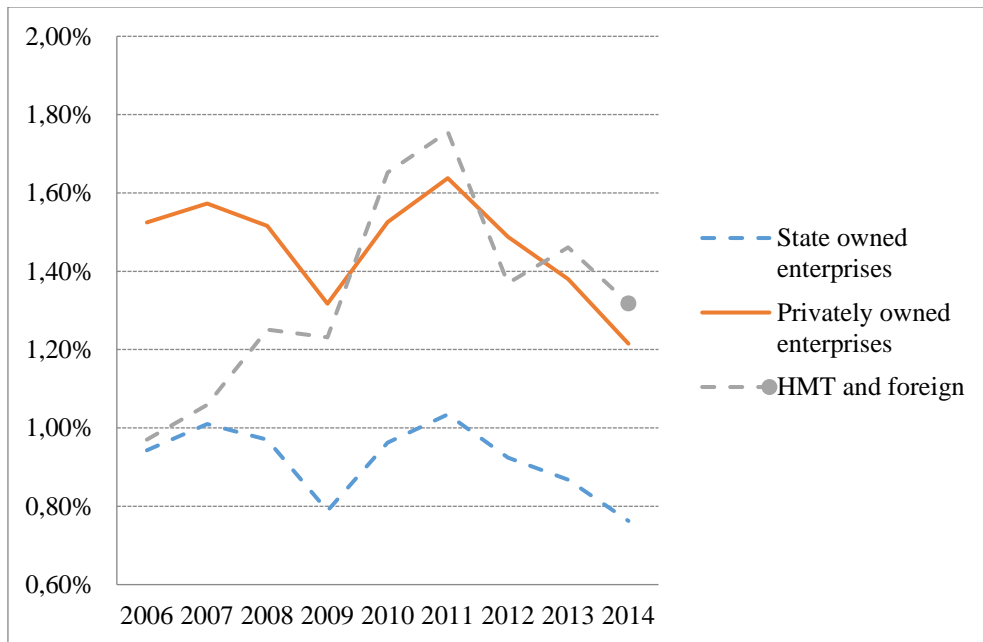
**Table 11: Aggregate Interest Rate According to Type of Ownership (%)**

Aggregate interest rate	2006	2007	2008	2009	2010	2011	2012
State owned enterprises	8.68	9.14	9.61	7.12	6.27	8.87	10.29
Privately owned enterprises	18.84	22.26	19.79	15.95	16.57	18.93	19.32
Hong Kong, Macao, Taiwan and foreign	13.22	14.23	14.69	11.73	11.79	15.69	16.32
People's Bank of China	6.12	7.47	5.31	5.31	5.81	6.56	6.00
Aggregate interest rate	2013	2014	2015	Average	Correlation	Difference	
State owned enterprises	10.01	10.65	9.36	9.00	0.02248	1.00	
Privately owned enterprises	17.22	15.37	13.85	17.81	0.8112	1.98	
Hong Kong, Macao, Taiwan and foreign	14.40	13.22	12.32	13.76	0.46281	1.53	
People's Bank of China	6.00	5.60	4.35	5.85	1	.	

Source: Author's calculations

As far as tax contribution is concerned, we can again see (Figure 3) tax contribution of POEs as twice as higher than tax contribution of SOEs. In a case of Hong Kong, Macao, Taiwan (HMT) and foreign funded enterprises, the tax contribution of such enterprises had increased since 2008. This as a consequent of new tax regime for foreign invested enterprises under which the newly enterprise income tax rate is 25% since 1 January 2008 (Bakker and Kloosterhof, 2010).

**Figure 3: Tax Contribution by Ownership**



Source: Author’s calculations

As we can see in Table 2, in term of aggregate tax contribution, privately owned businesses contribute 1.6 times more than SOEs to the state budget, and foreign firms contribute 1.5 times more than SOEs on average. We can say that, even in the case of tax burdens, SOEs have contribute significantly less amount of taxes than other market players. Therefore, we claim that there is a soft tax constraint in the Chinese system.

According to various researchers, such as Gregory and Stuart (2014) SOEs enjoy privileges, such as preferred access to bank credit at below market rates and favorable tax. Moreover, non-performing loans and political lending practices for SOEs prevail even nowadays (ibid). Naughton and Tsai (2015) speak of strong affinities between SOEs and state-run banks. According to Lardy (2014) and Gregory and Stuart (2014) private sector has only limited access to bank credit if they get any. Under such circumstances, after comparison and verifying with other researchers’ findings we state that our results are correct.

**Table 2: Aggregate tax Contribution (%)**

<b>Tax contribution</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>State owned enterprises</b>	0.94	1.01	0.97	0.79	0.96	1.03	0.92
<b>Privately owned enterprises</b>	1.52	1.57	1.52	1.32	1.53	1.64	1.49
<b>Hong Kong, Macao, Taiwan and foreign</b>	0.97	1.06	1.25	1.23	1.65	1.76	1.37
<b>Aggregate interest rate</b>	<b>2013</b>	<b>2014</b>	<b>Average</b>		<b>Difference</b>		
<b>State owned enterprises</b>	0.87	0.76	0.92		1.00		
<b>Privately owned enterprises</b>	1.38	1.22	1.46		1.59		
<b>Hong Kong, Macao, Taiwan and foreign</b>	1.46	1.32	1.34		1.46		

Source: Author's calculations

## 7. Conclusion

In this work, we have analyzed through our analytical and statistical methods our theoretical assumptions that the Chinese government uses its influence and intervenes in the market, depending on Kornai's theory of soft budget constraints. Based on a comparison of empirical data on interest payments between SOEs, privately-owned enterprises and foreign companies, we found that SOEs have considerably lower interest rates on their long-term liabilities than privately owned businesses and foreign companies. We have repeated the same attempt in case of tax burden and the result has come out similar, so SOEs have a significantly lower tax burden than other market players. Therefore, we have proven that soft tax and soft credit practices are widespread across Chinese industry which means that the first and the fifth EC's criteria are not met. Therefore, China still has a lot of work to reform its economy in order to meet criteria to be granted with MES. For now, if based solely on our empirical evidences, the EU should reject China's MES.

## Acknowledgements

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## References

- [1] Bakker, A. and Kloosterhof, S. (2010). *Tax Risk Management: From Risk to Opportunity*. Amsterdam, Netherlands: IBFD. ISBN: 9789087221799.
- [2] Cihelková, E. and Nguyen, P. H. (2016). Qualitative Changes in the Development of the EU-China Relationships: From one-dimensional, more-limited and one-level cooperation to the all-dimensional, wide-ranging and multi-tiered Strategic Partnership. *European Studies. The Review of European Law, Economics and Politics*, vol. 3, pp. 15–49.

- [3] Cihelková, E., Nguyen, P. H., Woźniaková, M. and Straková, R. (2017). The EU-China Comprehensive Strategic Partnership in Context of EU General Concept of the “Strategic Partnership”. *Journal of Security and Sustainability Issues*, vol. 6, nu. 4, pp. 729–744.
- [4] EC (Nov 2002). *Proposal for a Council Regulation further amending Council Regulation (EC) No 384/1996 on the protection against dumped imports from countries not members of the European Communities*. COM/2002/0623 final – ACC 2002/0204.Document EUR-lex – 52005PC0623.
- [5] EC (Nov 2017). *Client and Supplier Countries of the EU28 in Merchandise Trade (value %)*. European Commission. Directorate General for Trade. [cit.2018-02-26]. Available at: [http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc\\_122530.pdf](http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_122530.pdf).
- [6] EP (Nov 2015). *Granting Market Economy Status to China. An analysis of WTO law and of selected WTO members’ policy*. European Parliament. [cit.2018-02-26]. Available at: <http://www.europarl.europa.eu/RegData/etudes/IDAN/2015/...pdf>.
- [7] Fojtíková, L. (2012). China’s External Trade after Its Entrance into the WTO with the Impact on the EU. In *International Conference on European Integration 2012*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 56–65.
- [8] Fojtíková, L. (2016). China-EU Investment Relations: Towards a New Institutional Framework. In *Proceedings of the 14<sup>th</sup> International Scientific Conference on Economic Policy in the European Union Member Countries*. Opava: Silesian University, pp. 144–155.
- [9] Gregory, R. P. and Stuart, C. R. (2014). *The global economy and its economic systems*. 1<sup>st</sup> international edition. Boston: South-Western, Cengage Learning. ISBN 9781285167015.
- [10] Kornai, J. (1979). Resource-Constrained versus Demand-Constrained Systems. The Econometric Society. *Econometrica*, vol. 47, no. 4 (Jul. 1979), s. 801–819. [cit.2017-12-23]. Available at: <http://www.ie.ufrj.br/intranet/ie/userintranet/hpp/arquivos/...pdf>.
- [11] Kornai, J. (1980). *Economics of shortage*. Amsterdam: Elsevier Science Ltd/North-Holland Pub. Co. ISBN 978-0444860590.
- [12] Lardy, N. (2014). *Markets over Mao: The Rise of Private Business in China*. New York: Columbia University Press. ISBN 9780881326949.
- [13] National Bureau of Statistics of China. *Classification & Methods*. [cit.2017-12-10]. Available at: [http://www.stats.gov.cn/english/ClassificationsMethods/Definitions/200205/t20020517\\_72382.html](http://www.stats.gov.cn/english/ClassificationsMethods/Definitions/200205/t20020517_72382.html).
- [14] Naughton, B. and Tsai, K. S. (2015). *State Capitalism, Institutional Adaptation, and the Chinese Miracle*. Cambridge: Cambridge University Press. ISBN: 9781139962858.
- [15] PNB PARIBAS (Jan 2017). *European Union Dealing with Chinese competition*. [cit.2018-02-26]. Available at: <http://economic-research.bnpparibas.com/Views/DisplayPublication.aspx?type=document&IdPdf=29456>.
- [16] WTO (1994). *Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994*. [cit.2018-02-26]. Available at: [https://www.wto.org/english/docs\\_e/legal\\_e/19-adp.pdf](https://www.wto.org/english/docs_e/legal_e/19-adp.pdf).

# The Polish Healthcare System Towards the European Union Challenges

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## **Abstract**

*The European Union policy on the functioning of health systems in the Member States clearly emphasise the importance of social cohesion and social justice as well as sustainable development in these countries. One of symptoms of that policy was the adoption of Directive 2011/24 / EU of the European Parliament and of the Council of 9 March 2011 on the application of patients' rights in the cross-border healthcare. In accordance with assumptions, from that time the Polish market of health services has been opened to patients from other EU countries, and this change has given Polish patients the chance to receive treatment outside of the country. The proposed study is an attempt to answer following questions: how has the Polish health care market changed since then, to what extent has it satisfied the health needs of citizens of the Union and how does it care about its position in rankings of European health systems. In order to answer such questions, the author refers to the analysis of basic statistical data about the Polish health system, and cites the results of the Euro Health Consumer Index report. In particular, changes in access to health services and dynamics of index changes have been tracked since 2013.*

**Keywords:** health care system, EU Directive, Euro Health Consumer Index

**JEL Classification:** I11, I140, I18

## **1. Introduction**

One of the fundamental objectives of the European Union is to reduce economic and social disparities in Europe, both in relation to all EU countries, as well as for individual regions of these countries. Whereas sustainable and uniform economic development of these areas for many years was monitored and assisted by, among others, one of the most important elements of economic development which is health. The European Union treats the functioning of health systems as one of the elements of competitiveness of Member States, but at the same time support measures to reduce possible inequalities occurring in this area, which has not had inconsiderable resources from the structural funds and the investment allocated to interventions in the field of health (Laskowska, 2017). In addition to financial resources, the realization of its objectives, the Union supports the relevant legislation, and among the many acts found a Directive of the European Parliament and of the Council 2011/24 / EU of 9 March 2011 on the application of patients' rights in cross-border healthcare. This directive has the support not only access to medical services for EU citizens moving between countries of the Community, but above all to ensure equal, non-discriminatory access to safe, high quality cross-border healthcare services.

The directive seems to play an important role considering the aging process of societies in Western and Eastern Europe (Simpach, Pechrowa, 2016). It can help European citizens in getting easier access to health service. It is also important because of the increasing rate of immigration in Europe in the past few years (Nenicka, 2016), and free movement of workers within the Union (Remsova, 2016).

## 2. Directive and the Polish Health Market

Under the assumptions of the directive, Polish patients from 15 November 2014 have the opportunity to choose a medical facility (public or private) in any country of the Union, which will realize the need for such care, which could be met in the framework of services covered by Poland guaranteed in the provision of health care ([http://www.nfzszczecin.pl/nguqv\\_dyrektywa\\_transgraniczna.htm](http://www.nfzszczecin.pl/nguqv_dyrektywa_transgraniczna.htm)). The Directive does not cover services such as compulsory vaccinations, long-term care, allocation and access to organs intended for transplantation.

For the Polish patient, the directive does not however mean the possibility of using medical services in any EU country without any restrictions of a formal nature. He or she must first obtain a promise from the public payer (NHF), the purse to finance private service in the chosen EU country, and only at the very end, claim for reimbursement of costs incurred in the NFZ pool.

The National Health Fund prepared in their budget for the years 2014 - 2016 more than one billion zlotys for cross-border healthcare, but according to the report of the Supreme Chamber of Control of November 15, 2014. February 10, 2017 it received 17 090 requests for reimbursement for treatment abroad the total amount of 54.7 million zł. Requests concerned mainly the implementation of services for the treatment of cataract (approx. 91% of all applications) and joint diseases, such as hip and knee (Respecting patients' rights in cross-border healthcare, information on the results of the audit, the Supreme Chamber of Control, 2017) joint replacement.

The law governing cross-border medical services gave foreigners the possibility of using Polish medical facilities and implementation of their health care needs. Foreigners, according to this may consider the use of the services of Polish institutions. Although the Polish patient could have some concerns with interest to the Polish health service by citizens of the Union (due at least to the increased likelihood of lengthening queues for specialists), the Polish Ministry of Health provides that: *Paying to adopt a patient from abroad in the context of cross-border healthcare by Polish provider having a contract with the NFZ is possible if it does not impede access to health care services to patients Polish* ([www.mz.gov.pl](http://www.mz.gov.pl) January 2018). Concerns of patients also decreased in statistical data, according to which in 2014 only 5% (per annum) of all patients, were patients from abroad (Member state Data on cross-border healthcare Following Directive, 2015). The vast majority of entities having medicinal benefits granted to foreigners in the context of cross-border directive, did so in accordance with the price lists of paid benefits, but half of them admitted that the prices contained therein were higher than those used in the settlements with the NFZ. According to the European Commission, in 2015 the Polish healthcare system then settled costs in the home country, foreigners made only 3331 claims for reimbursement of benefits. Most foreign patients treated in Poland in 2015 came from Slovakia (1567), Denmark (1007) and the UK (432) (Member state Data on cross-border healthcare Following Directive, 2015).

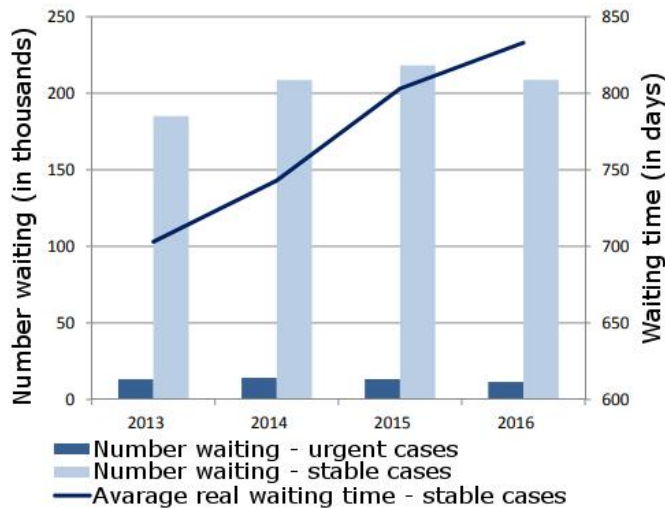
### 3. The Reaction of the Polish Healthcare System to EU Rules

In Poland, the planning of the health policy of the country is conducted by a number of government entities and the local governments, but the most important duties in this regard rests with the government (including the Ministry of Health). The mission of the Ministry is to *present a coherent, concerted and adequately justified Polish position in the area of health in all international forums* (www.mz.gov.pl 04.05.2016).

For the purposes of compliance with EU policy, it is assumed that the national strategic framework for policy in this area includes *a set of complementary documents defining the strategic direction and priorities for the provision of health care and public health (...) including the scope, timing, specific and comprehensive targets and instruments for monitoring and evaluation, to assess the progress in the implementation* (The national strategic framework. Policy Paper for the protection of health for the period 2014-2020, 2015).

The Polish health system, despite the very lofty goals and objectives, suffers from many problems of a legal, structural, but above all organizational one (Nieszporska, 2017). Among other things, because of this new ministers and thus, new parties having a significant impact on the creation of the health policy of the country today. They put emphasis on innovation, computerization, efficiency, dialogue and diminish bureaucracy of health (Janczewska-Radwan and evaluate BCC resort and present recommendations, 2018). All of these priorities for the sector are related to, but inseparable from improving the system in the context of the health needs of society, with better access to services, providing services of the highest professional level, efficient service for patients, or in establishing proper relationships between the patient and medical staff involved in the implementation of their health needs (Bielecki, Nieszporska, 2017).

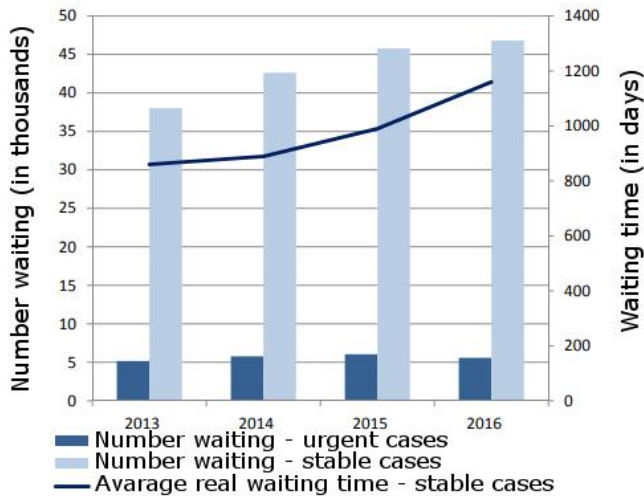
**Figure 1: Availability of Treatment for Cataract in the Years 2013-2016 in the National Health Fund Controlled Branches (as of October 31)**



Source: Respecting patients' rights in cross-border healthcare, information on the results of the audit, the Supreme Chamber of Control, LOP.430.001.2017 Reg. 45/2017 / P / 16/084 / LOP, Branch in Opole, p.14.

As the relevant reports show, since the implementation of the cross-border directive, access to health services, which Polish patients applied for outside of Poland, that is cataract removal and arthroplasty, has not improved. The waiting time for these procedures still remains extremely long in Poland (Figure 1, Figure 2), and the cross border movement of patients has not affected its change (Respecting patients' rights in cross-border healthcare, information on the results of the audit, the Supreme Chamber of Control, 2017).

**Figure 2: Availability Hip Replacement in the 2013-2016 National Health Fund in Controlled Branches (as of October 31)**



Source: Respecting patients' rights in cross-border healthcare, information on the results of the audit, the Supreme Chamber of Control, LOP.430.001.2017 Reg. 45/2017 / P / 16/084 / LOP, Branch in Opole, p.14.

As mentioned earlier, the budget of the National Health Fund, and therefore the main source of funding for medical services in Poland, due to the implementation of the Directive for cross-border has neither been significantly undermined because of numerous trips by Polish patients abroad for medical purposes, nor significantly and additionally increased by the influence of fees for treatment brought by foreigners.

This situation leads to the conclusion that Polish health care system is not used effectively according to the EU regulations and the implementation of the cross-border directive. Indeed there has been an improvement to the availability of medical services in Poland, or to improve the financial sector, which in turn implies the need to look for reasons for this state of affairs.

#### 4. The Efficiency of the Polish Health System with Other European Countries

The cross-border directive in its premise was to help the Polish patients not only gain access to medical services; it also had to promote the opening of Polish medical facilities for patients from other EU countries. Thus could become a great tool for the promotion of Polish medical knowledge and experience of medical personnel, applied technologies and therapies. For three years of the directive that has not happened. Still Polish medical care is seen



through the prism of various rankings and European data sets, painstakingly experiencing not only the strengths of the sector, but especially emphasizing its weaknesses.

There are many indicators and reports about the efficiency of health systems. As a rule, due to the large variety of areas analyzed, they require the use of multiple methods of measuring indicators, analytical techniques, and various methods of data collection and processing.

Each of them, however, tends to (Lichiello, 2002):

1. determining and matching purposes to the system;
2. assess the feasibility of the system;
3. stakeholder communication system;
4. assign responsibility to individual professional groups;
5. improve the quality of services;
6. tracking progress;
7. provide information to stakeholders about the state of the system and the progress in achieving the objectives.

Generally speaking, these meters allow the measurement of the effectiveness of the strategy of health systems checked by practitioners and creators of public health in many countries, but also managers of both other public sector organizations and private.

One of the most interesting indicators for an assessment of the health sectors in different countries is the Euro Health Consumer Index (EHCI). Its weight and importance in the verification of the state of health systems in different countries related to the fact of their evaluation of the patient's perspective. It seems that in today's realities of the role of the patient around which health systems are created, and so the patient wears off, and the weight of analysis and critical reflection on the state system is flipped on the economic dimension. Therefore, look at the eyes of the patient's system and just an opinion from the perspective of today has extraordinary significance, because it restores faith in the primary role in the functioning of the individual systems.

*EHCI* allows you to monitor the state of health systems in different countries. Its origins date back to 2004 and the publication of the report of the Swedish Health Consumer Index, in which the comparison of 21 countries using 12 indicators and focusing on creating health policy in different countries, the choices made by beneficiaries, level of service and access to information. Over the years, measures have changed and as in the beginning they focused on the most basic measures, such as infant mortality, survival in cancer, the treatment of stroke and heart disease, in subsequent years have been enriched with data on access to information, quality of service, mobility benefits, funding in the framework of cross-border directive, e-health (Björnberg, 2017). In principle, all included in the *EHCI* measures are summarized in the latest report of 6 groups:

1. patients' rights and information (12 indicators)
2. accessibility (waiting times for treatment) (6 indicators)
3. outcomes (9 indicators)
4. Range and reach of services provided (7 indicators)
5. prevention (7 indicators)
6. pharmaceuticals (7 indicators).

The 48 indicators are connected in one synthetic Euro Consumer Health Index, which value belongs to the range [0.1000]; the highest value is the best estimate of the health system of the country.

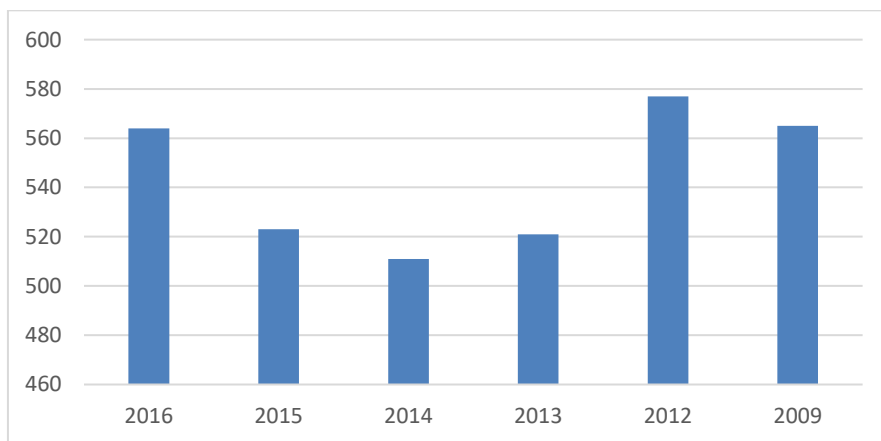
In 2016, the Polish health care system received an index of 564 and was in 31<sup>st</sup> place (35 countries analyzed). Although since 2014 the value of this index increased steadily (Figure 3), the Polish position has improved only slightly in 2016 compared to the previous year (in 2015 occupied 34<sup>th</sup> place), but placing our country at the end of the line.

For the patient outside of Poland, such information is certainly not an encouraging incentive to come to our country and submit to the treatment of Polish specialists. The latest report points to the failure of the Polish system of health especially in the following fields:

- patients' access to information;
- the possibility of registration and use of IT technology in dealing with the service provider;
- access to specialists and the use of medical technology in the treatment process;
- informal fees paid to doctors.

The report's authors also point out that: It is well known from management practice, that if top management starts focussing on things other than producing the best products or services, the quality of products/services declines (Björnberg, 2017), which clearly indicates the need for decentralization of the entire health system.

**Figure 3. The Values of the Euro Health Consumer Index for Selected Years in Poland**



Source: Own study

## 5. Conclusion

One of the objectives for the implementation of the directive was to promote cross-border cooperation on healthcare between Member States. Thus, the directive committed their countries to strengthen the relationship between providers and payers, which in turn would affect the more efficient functioning of health systems. Polish realities and the example of Polish medical facilities, as well as branches of the National Health Fund, according to the data submitted, did not react in any way to the opportunities in front of them with open EU legislation. So there was no system to relieve and reduce queues for Polish patients to specialists, nor recorded in recent years, excessive interest of foreigners Polish health service.

The treatment of foreigners in Poland could result in additional revenues to the funds of the NFZ, effective use of not fully utilised medical equipment, but above all popularization and

promotion of Polish hospitals in Europe. For this to happen, you need a number of actions from not only the Ministry of Health, but the individual health institutions. It is not only to improve the image of the Polish health system, but above all to make real changes to improve certain shortcomings of the Polish system, which to a large extent determines its position in the European market.

Moreover, the directive could be one of the reasons for Polish physicians and nurses, often very famous and respected in Europe, to work and earn fairly in Polish health institutions, not to look for better existence abroad. Unfortunately, the migration of Polish medical staff is still a vital problem, and Polish health institutions are still losing well educated workers and a chance to exist on the map of European providers of health services.

## References

- [1] Bielecki A., Nieszporska S. (2017). *The proposal of philosophical basis of the health care system Medicin.*, Health Care and Philosophy, 20 (1), 23-35.
- [2] Björnberg A., (2017). *The Euro Health Consumer Index 2016 report*. the Health Consumer Powerhouse 01-30.
- [3] Cross-border directive Portal of the National Focal Point, [http://www.nfz-szczecin.pl/nguqv\\_dyrektywa\\_transgraniczna.htm](http://www.nfz-szczecin.pl/nguqv_dyrektywa_transgraniczna.htm) [cit. 2018-01-29]
- [4] Directive of the European Parliament and of the Council 2011/24 / EU of 9 March 2011. On the application of patients' rights in cross-border healthcare Text with EEA relevance of 4 April 2011. (deadline for transposition of 25 October 2013).
- [5] *Janczewska-Radwan and evaluate BCC resort and provide recommendations*. (2018). Health Manager, Wednesday 14 February, [online] [cit. 2018-02-02] <https://www.termedia.pl/mz/Janczewska-Radwan-i-BCC-oceniaja-resort-i-przedstawiaja-rekomendacje,29186.html> (in Polish)
- [6] *The national strategic framework. Policy Paper for the protection of health for the period 2014-2020*. (2015). Warsaw July.
- [7] Laskowska I. (2017). *Cohesion Policy for the protection of health and the problem of health inequalities in Poland - a regional*. Optimum Economic Studies No. 2 (86), pp. 133-145 (in Polish).
- [8] Lichiello P.(2002). *Consultant Guidebook for Performance Measurement*, TurningPoint Collaborating for a New Century in Public Health [online] (cit.2018-02-12] <http://www.phf.org/resourcestools/documents/pmcguidebook.pdf>.
- [9] *Member state Data on cross-border healthcare Following Directive 2011/24 / EU. year 2015*, European Commission, Jonathan Olsson Consulting.
- [10] Nenicka L. (2016). *The Migration and the Search for European Identity*. Proceedings of the 3rd International Conference on European Integration 2016, VSB – Technical University of Ostrava, Faculty of Economics, Department of European Integration, May 19-20, Ostrava, Czech Republic, p.656-663.
- [11] Nieszporska S.(2017). *Priorities in the Polish health care system*, The European Journal of Health Economics, 18: 1-5.
- [12] Remsova K. (2016). *Free Movement of Workers within European Union in Terms of Private International Law*. Proceedings of the 3rd International Conference on

- European Integration 2016, VSB – Technical University of Ostrava, Faculty of Economics, Department of European Integration, May 19-20, Ostrava, Czech Republic, p.800-807.
- [13] *Respecting patients' rights in cross-border healthcare, information on audit results* (2017) Supreme Control Chamber, LOP.430.001.2017 Reg. 45/2017 / P / 16/084 / LOP, Delegation in Opole.
- [14] Simpach O., Pechrova M. (2016). *The Challenges of Migration to the European Union for Demographic Modeling*. Proceedings of the 3rd International Conference on European Integration 2016, VSB – Technical University of Ostrava, Faculty of Economics, Department of European Integration, May 19-20, Ostrava, Czech Republic, p.970-977.
- [15] Ministry of Health (Ministerstwo Zdrowia). Available at: [www.mz.gov.pl](http://www.mz.gov.pl) [cit. 2016-05-04]

## **Dimension of Migration – Challenge for European Future or Concern?**

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### **Abstract**

*Migration is a significant process through which the dynamics of population on the move substantially affect the long-term development of mankind. During the recent sixty years a host of citizens of the world have enjoyed improvements in the key indicators of development, such as the life expectancy and access to education and/or medical services, though, admittedly, this rule does not apply to all countries and all regions. Relying for her argument on historical facts complemented by current events, the author of the paper will present the chosen subject of migration as it relates to the European future and to the demographic patterns of migration. The article deals with the current wave of migration - it is about integration and people on the road. The arguments that the author puts forward rely, inter alia, on her personal experience gathered in a refugee camp a.k.a. the hotspot.*

**Keywords:** *demographic development, European future, migration*

**JEL Classification:** *F22, F69, O15*

### **1. Introduction**

Relying on her own practice and personal experience, the author builds her argument on historical facts and supports her reasoning by what has already been published in books written by sociologists and Arabists. The paper presents some selected results of research performed among African Muslims in Uganda and other subjects.

As experienced today, the migration from Near East to Europe seems to be logical. Half of the migrants do not leave for Europe but they move to richer Arabian countries in the Persian Gulf, Libya and Asia (Černý, 2016).

The Arab world is passing through development observed in Europe between the end of the 18th century and the beginning of the 20th century when Europe witnessed a population explosion followed by mass migration to other continents. At the early stage of such process the mortality figures typically go down while natality remains relatively high, at least for some time, and population grows. This is what is called the period of demographic transition. The concept of demographic transition may help us understand what happens in the Arab world - the explosively increasing number of people, particularly young people, brings in political instability. Inspired by the historical development in Europe, the model of demographic transition is instrumental in comprehending the causes of the instability. A publication by Černý, a sociologist, ascribes a greater importance in the process of destabilization to the growing population than to any religious discussions and speculations.

The Arab countries are obviously going through the same tempestuous changes as those triggered previously by population explosion in Europe. The number of inhabitants (especially the young ones) rises, and the fact translates itself into political instability. Černý believes that the Near East instability can be attributed rather to the growth of population than to the extensively discussed topic of political Islam. The young generation of the Arab countries has reached the phase known as the "political storming".

Having examined the historical record of the European continent, we can see that Europe tackled the population explosion and the destabilization it entailed by simply "packing the young people off" the continent. In this way (as sociologists and historians remind us) the "pressurized" space of Europe was in the 19th century gradually relieved by large-scale migration of Europeans, primarily to North America and later on to also Australia and New Zealand.

The demographic surge *per se* would not have to exacerbate the migration problem so much. The situation, however, is aggravated by the economic development lacking behind the population growth as regards first and foremost new job opportunities. Another stumbling block rests in the rigidity of political systems - the Near Eastern countries are increasingly unable to govern their own territories, as apparent, for instance, from the inability of centralized Arab states to keep in check the rising number of weapons distributed among their citizenry. In Egypt even the middle classes try to acquire weapons to protect their families (Černý, 2017). Though highly authoritarian and claiming exclusive control over using force, these countries cannot guarantee their citizens adequate level of safety, summarizes Černý. Moreover, they are incapable of routinely providing social services and other essentials, a fact making the life sort of difficult. In effect, despite their authoritarian nature, the countries protect neither individuals nor families (Černý, 2016).

Islam is a factor capable of cutting both ways. Western Europe, on the one hand, tends to accentuate the destabilizing potential of the religion, mentioning specifically the radical political Islam as manifested in the Islam state, the Al Qaeda organization and various terrorist groups present more or less in all Arab countries since the 1970s.

On the other hand, Islam may do the duty of a stabilizing element in social solidarity and justice. In the Near East region the Islamic society can play a prominent role in substituting for the collapsing and increasingly dysfunctional governments. Organizations associated with mosques and/or other places of worship take on charitable work, run hospitals, provide healthcare, distribute clothes, offer courses to adults, arrange special-interest groups for kids, organize leisure-time activities for teenagers, etc. Acting in the place of government, the Islamic movement and Islamic charity often deliver social care and undertake tasks already abandoned by the state, thus long-term contributing to the stability of the relevant regions. Both literature, professional articles (Crawley 2017, Bartram 2012) and the author's hands-on experience lead us to believe that in Islam the belief in God is immediately followed by the belief in family, namely a multigenerational family, wherein the generations mutually support and help each other. These supportive family ties are deeply embedded in religion and, in a way, their nature is a matter of culture. Close-knit families are stable families, and this fact is pivotal in stabilizing the entire region. Whenever a person or a nuclear family cannot rely on the state, they turn to their extended family or to the Islamic society.

## 2. Method

The paper presents a selection of results yielded by the author's own research and employed to provide arguments valid for the chosen subject.

The research applied the technique of in-person individually conducted semi-structured interviews (the face-to-face method) broken into partial research questions whose sequence led the respondents to think about their demands. The data thus obtained were analyzed and interpreted by the open-coding method.

To make the sample sufficiently heterogeneous, the participants were selected purposefully, the sole conditions being their Muslim faith and their long-term residency in a Muslim region. The effort resulted in fourteen interviews carried out between November 2017 and January 2018 in five Ugandan villages (district Ntungamo) with Muslim population. Each interview lasted 60 minutes on average.

To operationalize the research and to facilitate the analysis of collected data, the partial research questions had assigned to them the easily recognizable indicators or markers specified below (Disman, 2000).

### ***2.1 Partial Research Questions and Indicators***

Partial research question 1: Do you wish to move to Europe?

Indicators: distinctive features of environment; knowledgeability and skills of inhabitants; financial situation; job opportunities

Partial research question 2: What are your educational, healthcare and social care needs?

Indicators: quality elementary schools; availability of healthcare; maternity clinics and pregnancy assistance; leisure-time facilities for kids; care for the dying

When theoretically understood and properly conceptualized, the key terms allowed us to choose a sufficiently heterogeneous sample adequately representative of the entire spectrum. Before conducting the interviews, we sought to become thoroughly familiarized with the environment so that we could find our way in a surfeit of information, avoid preconceptions based on our previous experience of developmental aid and thus were able to interpret the respondents' replies undistorted by our professional expectations. The participants were told the purpose of the research beforehand.

## **3. Results**

Below you will find a partial summary capable of fully responding to the main research question and followed also by a space wherein the analyzed topic can be discussed.

The analysis was accompanied by direct quotations of participants' answers, but to keep the scope of this paper manageable, we have chosen not to include them.

Summary of Partial research question 1: Do you wish to move to Europe?

This information is absolutely essential to find out whether the participants plan to leave their country or not.

The participants do not wish to move to Europe or to any other foreign country. Despite having to cope with all sorts of adverse social occurrences, their families feel closely tied to the region and their internal solidarity allows them to live even in dire circumstances. The participants are well aware that the cost of the journey is beyond their means. Moreover, they appreciate their own educational insufficiency. In spite of their limited knowledge of geography, they perceive Europe as a country too remote to reach. They expect harmful consequences, primarily the disruption of the family, even if just a single member should leave to live outside

the family. This negative expectation is exacerbated by the fact that the leaving persons are typically males, husbands or elder sons, and the task of providing for the family thus passes onto females.

Our research and years of relevant practice in Africa show that another crucial issue (the same as encountered in the Near East) lies in the growth of younger generations wishing to graduate and get jobs. Scarcity of vacancies, however, may then allow the young people a scope for indulging in socially pathological behavior. In our practice we have witnessed an increased number of girls and young women involved in the sex business, petty theft, car holdup and criminal assaults against people (without killing anyone).

Summary of Partial research question 2: What are your educational, healthcare and social care needs?

Following from the first research question, the second one inquired into the specific requirements for education, healthcare and social care that were specified by persons living in the given region. The feedback thus obtained revealed also opportunities for implementing projects organized from abroad and/or for encouraging private donors who might consider funding centers for relevant activities. Acquiring this information was necessary for disclosing the needs that the locals may have. The research results thus unveiled gaps in the social and health sectors.

Asked to specify the target groups, the participants mentioned children, women and the dying. As regards education, the local teachers should be better educated or successful graduates of local universities should be recruited. Missing educators can be replaced by volunteers from Europe or other countries of the world. A greater number of properly trained midwives are needed. The results also indicate an increasing demand for palliative care and a total absence of palliative care provided in the field.

All the mosques that we visited during our research were very effective in offering public courses to children and adults (focused on using computers; making clothes; working with wood, etc.) as well as in organizing remedial and special-interest courses for small children. The needs identified by the participants as still unsatisfied were the same as those mentioned above - they can inspire new projects and be of interest for foreign sponsors, grant agencies and foreign embassies.

#### **4. Discussion**

The paper is a qualitative study aimed to treat the subject of Muslim community and their plans to move abroad. The methods chosen for the study were (1) qualitative research and (2) interview.

The research results can be of interest to non-profit organizations in Europe and other countries of the world; to sponsors, foreign investors, philanthropists and others. They could help to bring into existence the facilities still missing, whose absence might further deteriorate living conditions, and tell the potential supporters what needs to be built for the region's inhabitants. Even though the participants covered in our research do not consider leaving their region or home country, their worsening quality of life could force them to change their mind - that is why their well-being is a matter of consequence.

Speaking about the African state of Uganda and judging by our own practical experience from Malawi and Rwanda, also countries with numerous Muslim regions, our research leads us to believe that the local Muslims, though poor, do not want to leave their familiar environment



and would prefer to have their quality of life improved particularly by better healthcare, social care and new job opportunities for the young generation coming of age and wishing to begin a gainful occupation.

Concerning the Near Eastern regions, the situation is characteristic of lax security that the local government is capable of providing to the inhabitants. What is more, the circumstances are aggravated by the large arsenal of weapons possessed by citizens. In consequence, the government loses its exclusive control over using force and the regions grow lawless. In contrast to the Near East, the army and police of the above-mentioned African countries do a relatively good job protecting the local civil population, and the people are not prone to carry weapons. We have found that the Near East inhabitants are often better positioned to leave for Europe because their financial situation is not as stressful as that of the African Muslims.

Regarding the relevant sociological indicators, we have treated below also problems possibly entailed by the transfer to Europe:

On the one hand the Near East and African countries of our interest are typically abandoned by qualified workforce (brain drain) and the situation gradually develops into a shortage of labor. On the other hand migration has also positive consequences. The migrants remit back home billions of dollars and thus provide a sort of social support to their families. Author Ackers (2005) later author Bal, Willems (2014) have noted, our practical experience tells us that after some time the strong family ties lead to the rest of the family joining their relatives in Europe or any other country of the world. This frequently happens even if the newcomers have no jobs pre-negotiated. They simply rely on landing a job, but their chances of success (e.g. in Germany and despite developing digitization) are still slim even in services and blue-collar occupations (Nová, 2016). This process generates groups of unemployable people who were better off in their home countries receiving money sent by a single member of the family.

Our lessons learned in the Near East should serve as a blueprint for providing remote village regions of Africa with social, healthcare and educational services, and particularly with new job opportunities. The recent forty years have witnessed an exodus of village people to big cities. The exodus and the ensuing urbanization altered the character of society and resulted in political instability. A large number of people crowded within a limited living space are easily disgruntled. Sociologist Černý believes that such people are susceptible to ideology and readily involved in collective actions. Young migrants can also be greatly influenced by media and easy access to social networks where the life in Europe is depicted as the life in affluence. The Near East regions are densely populated with young persons, but they are very modern. By comparison, the Muslim regions in Africa are also densely populated with young persons, but they stick to the traditional culture.

Examining sociological indicators, we can see that the numbers of people moving out of the Near East tend to drop when the population explosion is substantially over. This situation has already been witnessed in some countries - for example Tunisia has undergone this process.

Another reason why people leave their home countries lies in their poor identification with the nation, the nation's representatives and its politics. The Near East states came into existence after the dissolution of the Ottoman Empire in the aftermath of WWI. Their borders were drawn up artificially, a fact to which the current instability can be partially attributed. Research performed by Černý (Černý 2016) suggests that about one third to one half of people living in Arab countries identify with their states. Approximately one third of them identifies with the entire Pan-Arabic space split into more than 20 states. The remainder identifies with the Pan-Islamic Ummah, i.e. with all Muslims. In other words, they perceive themselves primarily as Muslims. Besides, Muslims in regions identify themselves with their extended families. These

observations contrast with what can be seen in Europe. Europeans identify themselves first and foremost with their nation. That is why the decision of leaving the home country and moving with the whole family to a different environment is easier for the people from the Near East.

The opinion that the current migrants may fill in job vacancies and will thus be ultimately beneficial for the European economy contrasts with concerns expressed by the World Economic Forum (Fransen, Riuz, Vargas-Silva, 2017). Debating the subject of automatization in relation to the anticipated implementation of sophisticated technologies in Europe, the Forum developed these expectations: unemployment will grow even in developed European countries; the phenomenon will be strongest in Germany, where the number of vacancies will be reduced by automatization; therefore, the migrants can hardly be perceived as needed workforce. In addition, the Oxford analyses indicate that the situation is grave - too few job opportunities for too many job seekers. Germany, for instance, will face the consequences of automation already implemented within 5 years. Redundancy threatens especially the blue-collar positions occupied by migrants who can hardly be requalified to become IT specialists overnight. Taken into account must also be the language barrier; the level of education; and the work habits and competencies. Europe can learn a useful lesson from the situation in the United States: the influx of unskilled labor unable to speak English put USA at the cutting edge of automated industry. It resulted in the emergence of working poor; the distribution of food aid; and the rise in crime figures attributable to unemployment. Different forms of social exclusion can be encountered perhaps in all traditional societies and the same can be said of socially excluded individuals, groups and categories of people (Cummins, 2018). The socially excluded people are cut off institutions and services, social networks and educational opportunities. Counted among factors typical of social exclusion can thus be long-time unemployment, dependence on social benefits, living in spatially separated parts of communities (ghettos), low qualification, poor health, disintegration of families and the loss of self-esteem (Nová, 2016).

## **5. Conclusion**

Every year millions of people leave their homes. Proper investigating, mapping and understanding the problem of migration is a matter of consequence not only for the first transit countries but for all who are affected by the phenomenon. We should perceive each migrant as a human being with a story to tell. Before everything, he or she had to muster the courage to set out on the journey. Related to the population of Europe, the percentage of newcomers is too small to be dangerous. Should the risk be greater than negligible, their numbers would have to be higher and the process longer. Relying on what she experienced on the Balkan route of migration, the author believes that, even when making the decision, a good deal of the migrants do not expect a better life in Europe. Many are convinced that all they need to improve their life is greater security, better education, better healthcare and social care, and above all new job opportunities. With these facts of life available, a host of the people would not be led to consider leaving their homes. The future, however, has in store some environmental themes that will burden the Arab countries and the North of Africa in the years to come. Climate changes in the region and the exodus they could trigger will become, or have already become, a topic of political debate.

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### **References**

- [1] Ackers, L. (2005). Moving People and Knowledge: Scientific Mobility in the European Union. *International Migration*, vol 43, iss. 5, pp. 99–131.
- [2] Bal, E., Willems, R. (2014). Aspiring Migrants, Local Crises and the Imagination of Futures „Away from Home“. *Identities-Global studies in culture and power*, vol. 21, iss. 3, pp. 249–258.
- [3] Bartram, D. (2012). Migration, Methods and Innovation. In: Vargas-Silva, C. *Handbook of Research Methods in Migration*. UK: Centre on Migration, Policy and Society, University of Oxford.
- [4] Cummins, I. (2018). *Poverty, Inequality and Social Work*. Bristol: Policy Press at the University of Bristol.
- [5] Crawley, H. et al. (2017). *Unravelling Europe's migration crisis*. Bristol: Policy Press at the University of Bristol.
- [6] Černý, K. (2016). *Význam kmenové společnosti v 21. století*. Praha: Nakladatelství Lidové noviny.
- [7] Černý, K. (2017). *Velká blízkovýchodní nestabilita*. Praha: Nakladatelství Lidové noviny.
- [8] Černý, K. (2015). *Nad Evropou pŕlmlšíc*. Praha: Karolinum.
- [9] Černý, K. (2012). *Svŕt politického islámu*. Praha: Karolinum.
- [10] Disman, M. (2000). *Jak se vyrábí sociologická znalost*. Praha: Karolinum.
- [11] Fransen, S., Riuz, I., Vargas-Silva, C. (2017). Return Migration and Economic Outcomes in the Conflict Context. *Science Direct: World Development*, vol.95, pp. 196-210.
- [12] Nová, M. (2016). Migration – Models and Principles of Immigrant Integration. In KOVÁŘOVÁ, E., MELECKÝ, L., Staníčková, M. (eds.). *Proceedings of the 3rd International Conference on European Integration*. Ostrava: VŠB - Technical University of Ostrava, pp. 673-678.
- [13] Nová, M. (2016). Poverty and social exclusion. In: Suvada J., Czarnecki P., Mrazova M. *Interdisciplinary Updates on Health in Europe*. Warsaw: Management University, Warsaw 2016. p. 13-21.

## Orientation Towards EU Market – the Research Analysis of the Companies in the Silesian Voivodeship

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### **Abstract**

*Nowadays, entering foreign markets is an important aspect of running a business. On the one hand, it is an opportunity to gain a new resource for customers to increase sales and profits. On the other hand, it is a challenge for the entrepreneurs, and therefore, it is important that firms take into account development of strategies and management methods to enter foreign markets and operate there with success. Entering markets of countries belonging to the European Union can be regarded as a step towards the internationalization of business activity. The article raises issues related to the operation and functioning of the European Union markets in the context of internationalization and analyzes what types of markets are attractive targets of the surveyed companies, and what expectations for these markets have entrepreneurs from Silesian Voivodeship.*

**Keywords:** business management, EU markets, internationalization

**JEL Classification:** F10, F23, F61

### **1. Introduction**

Strategic management in enterprises, like and internationalization strategies are the foundation of the company's development and orientation to foreign markets. The strength of the state's market economy is reflected in the entrepreneurial potential because the activity of enterprises essentially affects the state of the state economy and realistically translates into its position on the international arena. The notion of an enterprise understood as a unit transforming three types of production factors into homogeneous and durable goods, which meet the consumer's needs, or as small, medium and large specialized institutions guiding production processes and havening the leading position in a modern economy (Samuelson, William, Nordhaus, 1995). In the era of economic globalization processes, it is all the more important to enable entrepreneurs to make the right political and administrative decisions to enter foreign markets, establish international cooperation and acquire skills to cope with difficult, sometimes emergency market situations and dynamically changing business conditions (Ślusarczyk, 2013). Programs, workshops, courses, support of agencies, foundations and other institutions of individual local and state authorities should be a permanent element of the process of stimulating entrepreneurship. State's support translates measurably into nationwide success - the income of the population increases, the supply of goods and services grows dynamically, which in turn brings the country's economic growth. Such opportunities for the development of business are to find in the EU market and, in the authors' opinion, the entrepreneurs in the majority are oriented towards the Single Market (aka the Internal Market) in their functioning. External conditions of entrepreneurial behaviors depend to a large extent on the state's priorities and economic goals, which can be exemplified by appropriate tax and credit policy,

banking and financial system, customs and social policy focused on the entrepreneurial climate. Thus, the EU common market with its policy of smooth flow of people, goods and services, lack of economic barriers and unified rules of doing business gives the whole variety of chances for companies to interact, cooperate and develop the business (Beck, 2012, Czegledy, 2012). Policy in connection with appropriate legislative solutions should be in line with the interest of entrepreneurs and thus, stimulate entrepreneurship and eliminate all barriers that can drastically limit it. It is all the more important because nowadays, the challenge for entrepreneurs is to operate in an international environment, which for many business entities will be an opportunity to gain new sales markets, new clients and making good business relationships. Such activity should regard the phenomena of internationalization, according to which degree one can divide the enterprises (Sutherland, Canwell, 2008, Barcik, 2016, Fránková, 2016). The original criterion was the division of enterprises into national and international, or domestic and foreign. However, the criterion has lost its relevance because today companies are most likely to become divided into national, international, multinational and global ones. The criterion of the division of enterprises due to their scope of activity according to the concept of R. W. Griffin is presented in Table 1.

**Table 1: The Criterion of The Division of Enterprises due to Their Scope of Activity**

TYPE OF COMPANY	SCOPE OF ACTIVITIES
<b>National Enterprise</b>	Resources purchased in the country are 100%.Sales of products and/or services in one country only.
<b>International Company</b>	The location of the company is mainly in one country, but resources and revenues in some specific part are obtained from other countries.
<b>Multinational enterprise</b>	Resources, raw materials, financial support are sourced from different sources in different countries. Production or sales have a worldwide reach.
<b>Global Enterprise</b>	It is a worldwide global company that does not demonstrate attachment to a particular country, a home nation.

Source: Own elaboration based on Griffin, R. W. (1996). *Podstawy zarządzania organizacjami*. Warszawa: PWN, p. 168.; Griffin, R.W. (2018). *Podstawy zarządzania organizacjami*. Warszawa: PWN, p. 153.

B. Stępień (2009), on the other hand, indicates several business classifications, including:

- commercial transactions: enterprises can split into importers and exporters,
- non-capital cooperation: enterprises, in this case, are divided into recipients and license donors, franchisers, turnkey contract partners, subcontracts members, consortia members, strategic allotment alliance partners, foreign project companies,
- capital investments: enterprises divide into financial alliances, joint ventures, brownfields investments and greenfield investments.

Cooperation with foreign partners based on strictly defined conditions is more permanent than in the case of the company's contacts with a foreign contractor as the part of export contracts. Such cooperation can be done mainly due to the long-term planned joint action, which is based not only on a specific agreement but, above all, on combining the capital employed in cooperation of enterprises (Sitek, 2000). Each field should be based on its tactics and

approaches to internationalization, despite the levels on which this concept can be considered, whether it is macroeconomic or microeconomic, one must take into account the fact that there is no single definition of internationalization, hence the need for a multi-aspect analysis of the phenomenon. In the management sciences, the most important issue in considering internationalization is the exact location and reflection its phenomenon in the context of the functioning of enterprises in international conditions, which are determined by certain factors (Daszkiewicz, Wach, 2012, Daszkiewicz, 2008, Mainela, Puhakka, Servais, 2014). One such factor is the fact that today functioning of enterprises on foreign markets is frequently caused by the lack of the possibility of selling products and services on the home market. A company that has the ability and desire to produce more, but the market does not allow redundancy of excess resources may be more likely to look for markets abroad. Since the European companies have access to the Single Market, such functioning in an international context is easier and brings more chances of improving the business position of the company on the market. Therefore, there exists a high probability that in case of Polish entities the choice between the EU market and other distant foreign markets will fall in favor. The access to common market allowed for the expansion of economic activity to neighboring markets and further in EU due to the disappearance of borders and customs, and the free transport of goods and services (Eidenmueller, Engert, Hornuf, 2010). The common EU market certainly offers many possibilities and, at the same time, is devoid of legal and economic constraints, which inhibit the development of companies from the micro and small enterprises sector. One can nowadays observe that modern enterprises prefer a dynamic and flexible business model, which results from the prevailing environmental conditions, and these are not only variable but also turbulent. They force the change of approach to managing the enterprise and the entire business model to a dynamic one that can keep up with the environment (Normann, 2001, Kamoun, 2008).

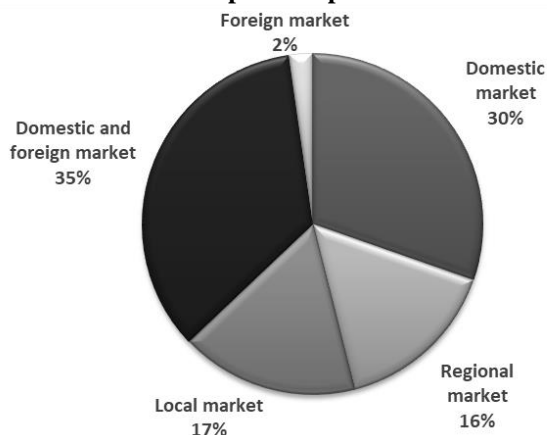
## **2. Problem Formulation and Methodology**

The article aims to analyze the business orientation of Polish companies. The authors accepted the hypothesis that Polish companies in their process of going beyond the Polish market is conditional on the environment and is focused on The European Single Market, rather than on markets other than EU countries. The results of the research and conclusions may be regarded as the indicator showing the level and range of internationalization of Polish companies in the Silesian Voivodeship, as well as, the basis for further studies. Due to the accepted hypothesis, the authors conducted the survey based on the questionnaire with the use of techniques CAWI and CATI. The study included 100 enterprises in the Silesian Voivodeship in 2016. Only companies strictly Polish, i.e., without foreign capital above 50%, were taken into consideration. The gathered information allowed for drawing conclusions which may be used in further studies as the basis for more advanced analysis.

## **3. The Results of the Study**

Data collection was based on the use of a quantitative method on a test sample (N = 100). The research sample included micro, small, medium and large enterprises, irrespective of the type of activity. The surveyed firms indicated the market they operate on and the results are presented in Figure 1.

**Figure 1: Types of Markets the Companies Operate on N=100**



Source: Own elaboration (2018)

The majority of surveyed firms operate only in Poland – 30% function in the domestic market, whereas, 16% and 17% of firms do not function outside the voivodeship, city or province. 37% is present outside Poland. Due to the purpose of the paper, the further discussion of the study results will refer to the 37% of companies which factually operate abroad. The exact number of them is 33 entities. The collected and grouped answers allowed for the identification in which region the surveyed companies operate mostly. The results are shown in Table 2.

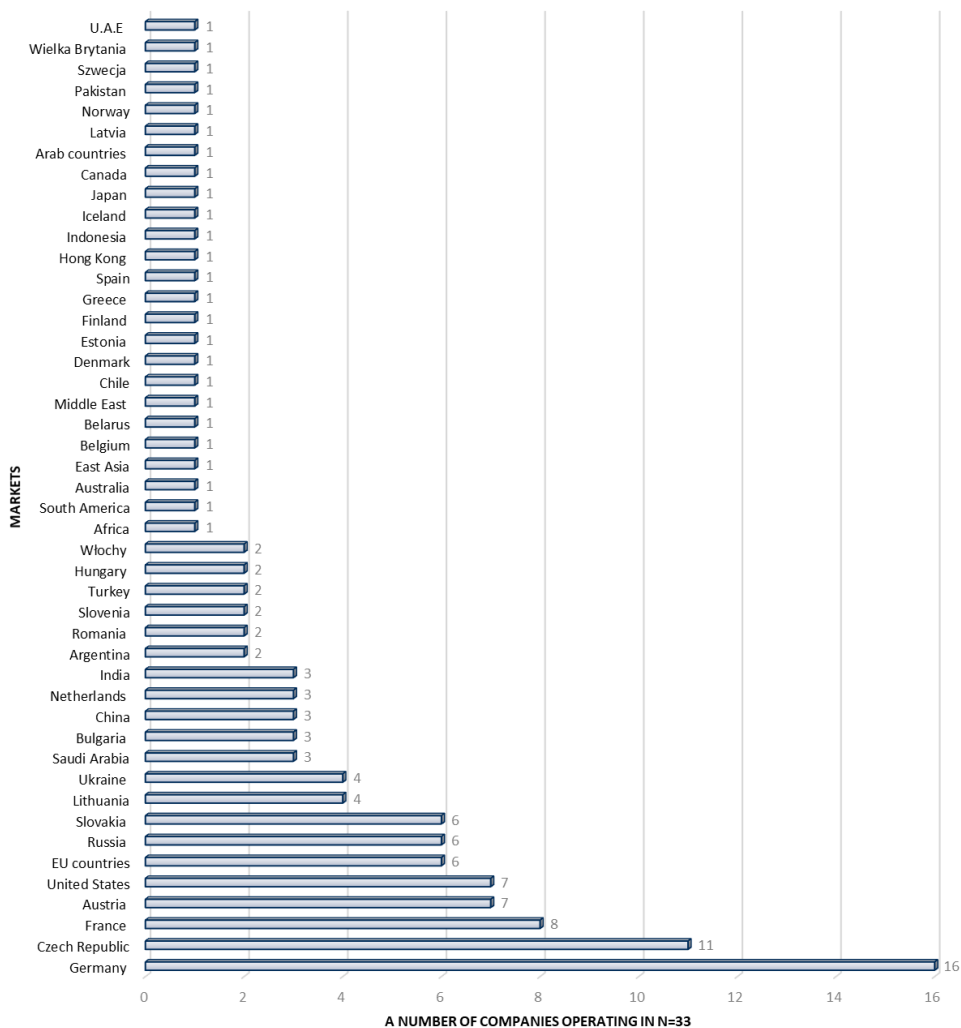
**Table 2: World Regions in which the Companies Operate N=33**

Region	Total number of indications per country in particular regions of the world
<b>European Union</b>	81
<b>Europe (non-EU)</b>	13
<b>Asia</b>	13
<b>North America</b>	8
<b>Middle East</b>	6
<b>South America</b>	4
<b>Africa</b>	1
<b>Australia</b>	1

Source: Own elaboration (2018)

The vast majority of the surveyed companies in the Silesian Voivodeship operate in the EU market. Much less have chosen the non-EU countries and Asia to enter with the business. The minority is present in the markets of countries of the North America or the Middle East, and just a few in South America. Just one company has the business connections in Africa (the country was not specified) and in Australia (one entrepreneur indicated this country). The general results support the authors' hypothesis that mainly EU countries are in favor and the companies choose them for their business activity. To find out in which countries the surveyed companies operate, they were asked to indicate specifically all states the companies have chosen to enter. The gathered information is presented in Figure 2.

**Figure 2: Countries in which Operate the Surveyed Companies N=33**



Source: Own elaboration (2018)

According to the collected data, it clearly can be noticed that if it comes to the EU markets, the companies which chose foreign markets mainly function in Germany (16 entities indicated this market), Czech Republic and France (11 and eight respectively). Subsequently, the markets of Slovakia, Lithuania are preferred. It should be evidently underlined, that the companies in the survey indicated in general EU counties as their answers and thus, the precise indications are not possible. However, it still proves the fact that in general, the EU market dominates as the direction of development of the surveyed companies. In case of other distant markets, the companies do their business in USA, Russia, and Ukraine. Individual units function in South America, Asia or the Middle East. Having in mind the orientation towards EU countries and principally German, Czech and French markets, it is worth showing what types of businesses operate there. The results are shown in Table 3.



**Table 3: Business Types Operating in EU Markets (the Cross-Section of Countries)**  
N=33

<b>TYPE OF BUSINESS</b>	<b>EU MARKETS</b>	<b>TOTAL NUMBER OF COUNTRIES</b>
<b>Building &amp; construction</b>	Finland	1
<b>Trade</b>	France, Austria, Czech Republic, United Kingdom, Hungary, Slovakia, Germany, Belgium	9
<b>IT</b>	European countries, Italy, France, Germany, Austria	4 (specified) 1 (generally EU)
<b>DTP</b>	Czech Republic, France, Austria	3
<b>Industrial manufacturing</b>	Czech Republic, Estonia, Latvia, Austria, Netherlands, Germany, Lithuania, France, Slovakia, Denmark, Bulgaria, Sweden, Slovenia	13
<b>The food industry</b>	Slovakia, Hungary, Lithuania, Bulgaria, United Kingdom	5
<b>Transport</b>	Germany, Czech Republic, Slovakia, Austria, Slovenia, Netherlands	6
<b>Tourism</b>	Italy, Bulgaria, Spain	3

Source: Own elaboration (2018)

According to data in Table 3, the companies of industrial manufacturing operate in 13 EU countries. Trade companies function in 9 EU countries, in 6 of them there are transport companies and five countries became the target for the food industry. The companies which do the tourism services operate in 3 EU markets, and the same situation is in case of the DPT companies. The IT entities operate in 4 specified countries of the European Union and one indicated in general EU countries in its answer. Only one company from the building and construction sector operates abroad in Finland.

## 5. Conclusion

The general conclusion based on the survey results is that:

- the level of internationalization of the surveyed companies is low: 37% out of 100 surveyed entities operate in foreign markets, the rest 63% of firms function only in Poland, which means they have not yet entered foreign markets,
- despite the low level of internationalization of business among the surveyed companies, it does not exclude the fact they do not benefit from the contact with foreign markets, which one may recognize in the supplementary analysis,
- regarding internationalization of business, the surveyed companies prefer the EU markets,
- the most attractive EU countries to operate in, according to the preferences of the surveyed entities, are Germany, Czech Republic, and France,
- principally the USA is as the distant non-EU target of doing business.

The results of the conducted survey among companies in the Silesian Voivodeship should be treated as a preliminary to further research and analysis. The authors accentuate the conclusion that if Polish companies consider extending their activities to foreign markets, they are willing to choose European Union countries, which probably results from the fact that the common EU market offers some development opportunities without undesirable restrictions. The additional reasons could be the proximity of these markets, cultural similarity, comparable habits and style of doing business, which translates into more comfortable conditions for achieving the intended goals.

## References

- [1] Barcik, A. (2016). Co-opetition of Enterprises in Terms of the European Competition Policy. In *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB – Technical University of Ostrava, pp. 65-71.
- [2] Beck, V. (2012). Financial Support versus Economic Development of Selected Regions in the EU. In *Proceedings of the 1st International Conference on European Integration 2012*. Ostrava: VŠB – Technical University of Ostrava, pp. 8-18.
- [3] Czegledy, T. (2012). Global and European Challenges on Some Issues of Global Governance. In *Proceedings of the 1st International Conference on European Integration 2012*. Ostrava: VŠB – Technical University of Ostrava, pp. 38-47.
- [4] Daszkiewicz, N. (2008). *Konkurencyjność. Poziom makro, mezo i mikro*. Warszawa: PWN.
- [5] Daszkiewicz, N., Wach, K. (2012). *Internationalization of SMEs. Context, models and implementation*. Gdańsk: GUT.
- [6] Eidenmueller, H., Engert, A. and Hornuf, L. (2010). How Does the Market React to the Societas Europaea? *European Business Organization Law Review*, vol. 11, issue 1, pp. 35-50.
- [7] Fránková, S. (2016). Instruments for Innovation Support and Their Classification: an Example of Instruments used in European Countries. In *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 239-246.
- [8] Griffin, R.W. (1996). *Podstawy zarządzania organizacjami*. Warszawa: PWN.
- [9] Griffin, R.W. (2018). *Podstawy zarządzania organizacjami*. Warszawa: PWN.
- [10] Hauer, T. (2016). Globalization and Political Economy of Speed. In *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 319-325.
- [11] Kamoun, F. (2008). Rethinking the Business Model with RFID. *Communications of the Association for Information Systems*, vol. 22, article 35, pp. 634-659.
- [12] Mainela, T., Puhakka, V., Servais, P. (2014). The Concept of International Opportunity in International Entrepreneurship: A Review and a Research Agenda. *International Journal of Management Reviews*, vol. 16, pp. 105-129.
- [13] Normann, R. (2001). *Reframing Business: When the Map Changes the Landscape*. Chichester: John Wiley & Sons.

- [14] Samuelson, P., Nordhaus, W. D. (1995). *Ekonomia*. Warszawa: PWN.
- [15] Sitek, E. (2000). *Inwestycje bezpośrednie przedsiębiorstwa na rynku zagranicznym*. Częstochowa: Wydawnictwo Wydziału Zarządzania Politechniki Częstochowskiej.
- [16] Ślusarczyk, B. (2013). *Teoretyczno-praktyczne aspekty globalizacji gospodarczej*. Częstochowa: Sekcja Wydawnictw Wydziału Zarządzania Politechniki Częstochowskiej.
- [17] Stępień, B. (2009). *Instytucjonalne uwarunkowania działalności przedsiębiorstw międzynarodowych*. Poznań: Wydawnictwo Uniwersytetu Ekonomicznego w Poznaniu.
- [18] Sutherland, J., Canwell, D. (2008). *Klucz do biznesu międzynarodowego. Najważniejsze teorie, pojęcia, postaci*. Warszawa: PWN.

## The 16+1 Platform of Cooperation

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### **Abstract**

*The aim of this paper is to present the 16+1 platform of cooperation between China and the participating countries of Central and Eastern Europe. The rationale behind China's creation of the platform will be explored, and the substance and mechanism of cooperation will be described. The results of this cooperation for trade between China and its European partners will be highlighted. Drawbacks of the cooperation will also be discussed. The results up to now show that while the platform has great potential, especially in the area of infrastructure development, the actual results so far have not lived up to expectations, due to the differing ideas of China and its European partners. The paper is written from the point of view of the realist school of the academic discipline of international relations, which views states as unitary actors. Information was obtained mainly through internet portals of the relevant Chinese and CEE governmental institutions, NGOs and media, due to the currency of the topic.*

**Keywords:** 16+1 platform, Central and Eastern Europe, China

**JEL Classification:** F50, F53, F55

### **1. Introduction**

The aim of this paper is to present the 16+1 platform of cooperation between China and the participating countries of Central and Eastern Europe (CEE). After the problem formulation and methodology, the paper will shift to the most important aspect of cooperation between the 16 CEE countries (CEECs) and China, i.e. the role of the CEECs in China's Belt and Road Initiative (BRI). Focus will also be on the results of economic cooperation within the 16+1 platform, e.g. trade but especially as concerns Chinese investment in the region and its drawbacks. The paper will then deal with the hurdles of cooperation between the CEECs and China.

First of all, it is necessary to present an outline of the 16+1 platform. This platform consists of China on the one hand (the "plus one") and sixteen CEECs on the other. The CEECs involved comprise 11 EU member states (Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia – all of them were among the so-called "new" members, i.e. those countries that joined the EU in and after 2004), as well as 5 non-EU countries of the Western Balkans (Albania, Bosnia and Herzegovina, Macedonia, Montenegro and Serbia). These five Balkan countries are all candidates for EU membership in various stages of progress. Every one of these CEECs shares a common historical heritage of being part of the Soviet bloc in the recent past.

The 16+1 platform is a very loose grouping of states without any formal institutions other than a secretariat. This sole permanent organ is located in Beijing, and it is part of China's Ministry

of Foreign Affairs. The basis for the establishment of the 16+1 forum was laid in 2011 in Budapest, Hungary, as part of an official visit by Wen Jiabao, China's prime minister at the time. The first official 16+1 summit of heads of government took place the following year in Warsaw, Poland. This set the trend for subsequent annual summits. The 2012 Warsaw summit established the Secretariat and a 10 billion USD Chinese credit facility for CEECs. Following Warsaw, annual summits were held in Bucharest in 2013, Belgrade in 2014, Suzhou in 2015, Riga in 2016 and, most recently, Budapest in November 2017.

The ostensible reason why China initiated this platform was that there is still a big difference in the economies of these "new" EU members (and the EU candidates) compared to the "old" members states that were not formerly part of the Socialist bloc. Therefore China needed a separate platform to deal with these countries and their specificities. There is a tradition in China, going back to the beginnings of the Cold War, to see Eastern and Western Europe as separate. Even in the 1990s, CEE was categorized by the Ministry of Foreign Affairs of the PRC as belonging to the post-Soviet Eurasian grouping of states rather than to Europe. This view has been adjusted somewhat after 2004, when eight CEECs (as well as Cyprus and Malta) joined the EU. The ministry re-categorized these countries under the Europe grouping of states, even though a perception of difference remained. CEE is seen as distinct not only from the point of view of the economy, but also by its dependence on great powers and factionalism, as seen by the formation of sub-regional groupings such as the Visegrád Four forum of states (Pleschová, 2015, p. 582). Another reason was to partially reorient focus from the "old" EU members after a slump in trade because of the post-2008 economic crisis, due to a decrease in imports by the Western EU members from China. In CEE, China hoped to replicate what it had achieved with the "old" EU in the preceding decade of the 2000s, when trade between the EU and China increased by over 400%. This rapid growth in trade led to the formation of the China-EU strategic partnership in 2003. The EU became China's largest trading partner the following year (Baláž, Szokeová, Zábojník, 2012, p. 135). Apart from the decline in trade growth, there was also a cooling of political relations between China and the "old" EU caused by economic and ideological rivalry (Pleschová, 2015, p. 582).

The CEECs have a lot to offer China. Their workforce is equally skilled to the workers of Western countries, with the advantage of being much cheaper in comparison (Stanzel, Kratz, Szczudlik, Pavličević, 2016, p. 1). The economies of these countries are also quite open and export-oriented, because of their relatively small size and population. Their openness is also due to their EU membership or, for the candidate countries, their ongoing process of European integration. The "new" EU members in the 16+1 platform also bring an added bonus for China, in that the products of Chinese companies are more easily able to get access to the markets in the Western EU countries, which China is still eminently interested in (Stanzel, Kratz, Szczudlik, Pavličević, 2016, p. 7). Another aspect of the CEECs developed below is their prime location on China's Belt and Road project.

## **2. Problem Formulation and Methodology**

The 16+1 platform of cooperation was greeted with enthusiasm by the participating CEECs. They expected a significant increase in investment from Chinese companies, especially greenfield investment with the goal of bringing job opportunities. Expectations were especially high concerning the development of transportation infrastructure within the BRI project. However, the reality has not lived up to the optimism. The reasons for this are many and need to be further investigated to ensure higher effectiveness of regional cooperation in the future. The amount of Chinese investment in the region has been lower than expected, with its distribution also being an issue. This is however partly due to the inability of CEECs to

cooperate in presenting large cross-border investment opportunities which the Chinese would prefer. Instead, there is a sense of rivalry among the CEECs for Chinese investment. It is also necessary to take into account the wary attitude of the EU and its Western member states to this platform. It is viewed by them as an attempt by China to divide and thus weaken the EU. There are also fears of China flaunting the EU's strict regulations on investment. China and its partner CEECs must therefore find an effective way to allay these concerns.

Information was obtained mainly through internet portals of scientific institutions, NGOs and media, mainly from CEE. The currency of the topic necessitates the reliance on internet sources. Research was conducted mainly by the method of study of scholarly sources. Among the methodology used were the content analysis of texts by various scholars on the topic and the synthesis of their findings into a coherent narrative. The paper is written from the viewpoint of the discipline of International Relations (specifically the neorealist school of IR), and therefore it uses the terminology of IR. In this vein, the states involved will be studied as unitary actors in keeping with the realist paradigm. This is relevant especially in the case of China, where the state has extensive control over the economy and influence over economic actors. Internal policy debates within these states will thus not be highlighted.

### **3. Problem Solution**

#### ***3.1 The 16+1 Cooperation as a Mechanism for the BRI***

One of the main reasons for the initiation of the 16+1 platform was to facilitate cooperation on projects that fall under China's Belt and Road Initiative (Sinopsis, 2017). The CEE region is has the perfect position of being a gateway to the countries of Western Europe, which represent the opposite terminus of the BRI. In this respect, CEE forms part of the bridge spanning both edges of the Eurasian continent. In this vein, the summits of the 16+1 nations have been used to push forward several projects in the sphere of transportation infrastructure.

The importance of CEE can be seen in the volume of train traffic, as well as the enthusiasm of CEECs to be part of the main rail routes from China to Western Europe. There were 1 881 cargo trains between China and Europe in 2016, with this number forecast to rise to 5 000 trains a year by 2020 (SME, 2017). Almost all of them come to their destinations in Europe via the northern route, from China through Kazakhstan, Russia, Belarus and Poland, and from there on to Germany and the rest of Western Europe (Štálmach-Kušnírová, 2016). But in recent years, a southern route is being developed, which would run from Piraeus in Greece through Belgrade and Budapest to Vienna. The principal part of this transportation corridor, the Belgrade-Budapest railroad, was agreed upon at the 16+1s summit in Bucharest in 2013, and confirmed one year later at the 16+1 summit in Belgrade. It has since become the flagship project of the 16+1 platform and of the BRI in CEE. The railway would link the Maritime Silk Road, which goes from China to Piraeus, with the overland railway from China to Europe, as the so-called China-Europe Land-Sea Express Line (Eszterhai, 2017).

In addition to both these routes, there is also a potential middle route through the Ukraine and Slovakia and on to Vienna, where it would connect to the southern route. As could be expected, Slovakia has an interest in developing this alternative route (Štálmach-Kušnírová, 2016). Slovakia's arguments for the development of this corridor are based on the utilization of the cargo transfer node from the Soviet-style broad gauge railway to the European gauge in Čierna nad Tisou in Eastern Slovakia. So far, this potential route is only at the level of a memorandum of intent, signed at the 16+1 summit in Riga in 2016 (Pravda, 2016). Among other suggested transportation projects or corridors are a connection between Bucharest and Vienna, or a

reconstruction of the Belgrade to Bar railway, which was also agreed upon at the Riga 2016 summit. There is also an idea to connect the corners of CEE in the so-called Adriatic-Baltic-Black Sea Seaport Cooperation, put forward in 2015 (Eszterhai, 2017).

### **3.2 Results of Economic Cooperation**

So far, the results of this cooperation in the area of trade and investment have been uneven. Between 2009 and 2014, trade with China increased by 86% for the 16 involved CEECs. Exports from CEE to China grew by 173%, compared to a 91% increase in exports to China from the EU as a whole (Stanzel, Kratz, Szczudlik, Pavličević, 2016, p. 6). On the whole, however, trade between the EU and China suffered, with total trade declining by 5.3% from 2014 to 2015. Even so, the EU remained China's largest and most important trade partner, with their mutual trade worth 323.01 billion yuan (Ziyadin, Suiubayeva, Kabasheva, Moldazhanov, 2017, p. 38). Therefore, the China-CEE trade has had a more positive dynamic than China-EU trade, visible mainly in the more rapid growth of exports. This development was in the context of the aftermath of the global economic recession of 2008 and the following years. The slowdown in mutual trade with the EU, especially its wealthy Western member states, was one of the main reasons China chose to develop its trade relations with the 16 CEECs. But in spite of these figures, export from the involved CEECs is still less than the amount of Chinese exports to this region, which causes the CEE region to have a 34% trade deficit with China. And for China, CEE went from being 9% to 10% of its trade, which does not suggest a rise in importance of the CEE region for Chinese trade so far.

In the case of investment, in the same period, FDI from China to the CEECs increased from 400 million USD to 1.7 billion USD (Stanzel, Kratz, Szczudlik, Pavličević, 2016, p. 6). There is a certain level of disappointment among the CEECs about Chinese investment, namely its volume, structure and destination. Regarding the volume, there was far less investment coming from China than the CEECs hoped for (Pleschová, 2015a). This can be explained by the mentioned lack of cooperation between the CEECs, as well as them not being able to offer the specific types of investment opportunities the Chinese wanted. This ties in to criticism about the structure of China's investment. The governments of the CEECs were hoping to get greenfield investments in locations where none were present previously. They expected Chinese companies to develop infrastructure and create jobs in their respective countries. But most Chinese investments in the CEE region were acquisitions, aiming to obtain technological know-how and gain a foothold in the European market. (Stanzel, Kratz, Szczudlik, Pavličević, 2016, p. 8). This focus by China fits within their investment strategy in Europe in general. It is most visible in Chinese investment in the EU, where China aims to acquire know-how in high-tech sectors of industry. This leads to a risk that China would reverse-engineer the know-how and use their economic advantages to take over those markets where the EU has been dominant (Baláž, 2014, p. 20). A similar trend is evident in the CEECs, mostly the new EU member states. This has led to a sense of caution on the part of the CEECs towards deepening their economic cooperation with China.

Finally, the destination of Chinese investment also faces criticism. There is also a perception in the CEECs of favoritism by China towards certain partners, especially the larger CEECs (Stanzel, Kratz, Szczudlik, Pavličević, 2016, p. 3). This is shown by the fact that in 2014, 95% of investment from China went to just six countries – Hungary, Poland, the Czech Republic, Slovakia, Romania and Bulgaria. Of these, Hungary is the leader in gaining Chinese investment (Drapáková, 2017). Furthermore, also in 2014, 80% of Chinese trade with CEE went to just five countries, namely the same ones enumerated above minus Bulgaria (Stanzel, Kratz, Szczudlik, Pavličević, 2016, p. 6). But this trend may be changing as China is redirecting its

focus on the EU candidate countries of the Western Balkans for reasons discussed below. These countries are a good alternative destination for Chinese investment thanks to their lower manufacturing costs and location between the Mediterranean Sea and the EU. They are also hungry for investment, to lower their exceptionally high unemployment rates and brain drain, as well as their employment structure, which is relatively more concentrated in low-tech and low value added sectors. This makes them more amenable to China's conditions (Gabrielová, 2012, p. 72-73). The impact of this on their EU membership aspirations may however become an issue. Among these countries, Serbia is emerging as a new favorite destination of Chinese investment. This was already visible in the approval of the Belgrade-Budapest and Belgrade-Bar railways. But transportation corridors are not the only area of China's economic interest in the region. Among the largest investment projects of China in CEE was the acquisition of the Železara steel works in Smederevo, Serbia, by the Chinese steel manufacturing conglomerate HeSteel Group in April 2016. HeSteel Group has pledged to continue production in the steel mill and to contribute another 300 million USD worth of investment for its development. There are plans for a similar acquisition of the U.S. Steel Košice steelworks in Eastern Slovakia by HeSteel Group (Brocková, 2016 p. 64). These steps open questions about Chinese trade practices, such as protection of intellectual property, unfair dumping (especially prevalent in the steel sector), the presence of Chinese companies linked to the state in key strategic sectors of the economies of the CEECs, or the position of European steel producers which are direct rivals of Chinese producers. There are, however, expectations that China will move closer to the global mainstream at least in the area of investment practices. This is due to China's rising status as an exporter of FDI, meaning that it would want to ensure that investments from China are welcomed (Brocková, 2015, p. 62).

### ***3.3 Problems of the 16+1 Cooperation***

The 16+1 platform of cooperation still has plenty of hurdles to overcome before the high expectations of the CEECs of this platform are met. Though the platform was expected to promote cooperation among the CEECs, in practice it has rather led to competition between them for Chinese investment (Sinopsis, 2017). As such, the platform often resembles 16 bilateral platforms rather than one single multilateral grouping. Another issue is that even though China sees CEECs as having enough in common to merit creating this forum, their differences, especially in their degree of EU integration, makes adopting a common policy difficult. This is visible e.g. in the Chinese demands for state guarantees for their investment projects, which is another major hurdle to more cooperation and investment from China. But such guarantees are often beyond the possibilities of the CEECs, especially for those heavily hit by the post-2008 economic recession. These guarantees can also be contrary to EU regulations on investment aid (Stanzel, Kratz, Szczudlik, Pavličević, 2016, p. 8). The result is that the more integrated the country is in the EU (i.e. whether the country is a EU candidate, a full EU member, or Eurozone member), the less interested it is in accepting China's terms. This means that the Western Balkan countries that are not yet members of the EU are less constrained by EU regulations. This might help explain China's growing interest in Serbia and the infrastructure projects in the Balkans (Pleschová, 2015a).

Furthermore, the perceived favoritism of China towards certain larger CEE economies in allocating investment is also seen as a source of disappointment by those CEECs that see themselves as having been left out of the main scope of China's interest. However, this "favoritism" can be seen as a mark of Chinese pragmatism, since larger economies usually are more interesting trading partners and investment destinations. In any case, this trend may change as China shifts its focus from the EU member states in the platform to the candidate states of the Western Balkans. The reason for this shift is the aforementioned stricter



investment regulation of the EU. In contrast, the Balkan states are more open to China's methods. The shift is in progress as can be seen in the importance attached to the projects of the Belgrade-Budapest and Belgrade-Bar railways. For example, Serbia had the largest number of agreements with China as of 2016 (CorD, 2016). In the same year, Serbia and China upgraded their relations to a comprehensive strategic partnership (Stanzel, Kratz, Szczudlik, Pavličević, 2016, p. 12).

The CEECs, especially EU members, also need to take into account the position of the EU and its powerful "old" members. When the 16+1 platform launched, the EU responded towards the initiative with wariness. The main reason for the EU's concerns was a fear of China using a "divide and conquer" approach to Europe and the EU. According to this position, China is using the 16+1 platform as an attempt to drive a wedge between the old and new EU members to weaken the EU, especially as an economic rival to China, as well as to increase China's own influence within it (Grieger, 2016, p. 10). What is more, even though the CEECs were supportive of the 16+1 cooperation at first, they have also partially internalized these concerns. This added to the caution of the EU-member CEECs towards deeper cooperation as explained above (Stanzel, Kratz, Szczudlik, Pavličević, 2016, p. 2). Of course, China declares that cooperation within the 16+1 platform is complementary to cooperation with the EU, not contradictory (Grieger, 2016, p. 4). This is one of the advertised features of China-led cooperation. In fact, the 16+1 partners have agreed that cooperation has to be in line with EU laws and regulations (Eszterhai, 2017). Another reason for the cool reception of the 16+1 cooperation by the EU was a fear that China would gain undue influence in the strategic enterprises of the members (Szalai, 2017). One example was an attempt by a Chinese company to win the contract on expanding the Czech nuclear power plant in Dukovany without a tender (Sinopsis, 2017). However, these fears have largely been alleviated because of the slow progress in 16+1 cooperation so far.

#### 4. Conclusion

The 16+1 partnership between China and the CEECs still has many hurdles to overcome. One of the most important of these is a failure of the CEECs to cooperate among themselves in preparing and presenting multinational projects, which would be more interesting for Chinese investors. This preference for bilateral relations with China among the CEECs and their small enthusiasm for multilateral cooperation pose a significant challenge to the effectiveness of the 16+1 platform. The CEECs are also disappointed that the amount of Chinese investment did not attain the levels that they had anticipated. This disappointment extend to the structure of the investment that did pour into the region, which was oriented more toward acquisitions rather than toward greenfield projects as the CEECs would have preferred, which would have resulted in more robust job creation. This is explained by the investment following the priorities of the Chinese companies involved. These companies prefer the acquisition of new technologies and knowhow as well as gaining a foothold for themselves in the EU market. The destination of the investments is also controversial, with most of them going to just a few of the largest CEECs. One suggested method of remedying this is by focusing more on non-economic cooperation to balance out the lack of economic cooperation, at least until the later is more substantial.

The attitude of the EU, and its Western or "old" members, presents another source of problems for the 16+1 forum. From the beginnings of the 16+1 cooperation, the EU has been wary towards it. The EU would have preferred a common approach toward China that would take the interests of all members into account and would not split the EU into two groups. There was, and continues to be, a suspicion within the EU that China is pursuing a "divide and

conquer” strategy and trying to divide the old and new members, weakening the Union and enabling China to influence EU affairs from within through member state governments favorable to China. The EU is also nervous about Chinese demands that the CEECs give state guarantees for the investments made by Chinese companies. However, many of the CEE partners were simply unable to offer guarantees of this type, especially in the aftermath of the post-2008 economic crisis. Furthermore, these guarantees could potentially be against EU investment regulations. This was another reason why the EU was wary of the increasing influence of China and Chinese companies on the policies of the EU. China has attempted to mitigate these suspicions with claims that the projects within the scope of the 16+1 platform are based on the necessary EU regulations. China also affirms that 16+1 cooperation it is complementary to EU-China cooperation, not an alternative to it. It is suggested that China and its CEE partners should involve the EU more closely in the workings of the 16+1 platform. This would get help China to get its point across that the membership of the CEECs in the platform is also complementary to their membership in the EU. In the meantime, during the last few years the focus of Chinese infrastructure investment has turned to the Balkans, especially Serbia. This is visible in the development of the two main infrastructure projects of the BRI in the region, the Belgrade-Budapest railway and the Belgrade-Bar railway. It remains to be seen how the CEE region will be able to better benefit from the potential of cooperation with China, as well as whether China will succeed in addressing the weaknesses of cooperation with CEE.

## References

- [1] Baláž, P. (2014). Globalization of the World Economy and the Impact of China’s Expansion on the Competitiveness of EU. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 14-25.
- [2] Baláž, P., Szokeová, S. and Zábajník, S. (2012). *Čínska ekonomika: nová dimenzia globalizácie svetového hospodárstva*. Bratislava: Sprint2.
- [3] Brocková, K. (2015). Prístup ČLR k medzinárodnoprávnej ochrane investícií. In *Ekonomické, politické a právne otázky medzinárodných vzťahov 2015. Zborník vedeckých prác*. Bratislava: EUBA, Faculty of International Relations, pp. 61-66
- [4] Brocková, K. (2016). Čína a jej štatút trhovej ekonomiky v rámci WTO. In *Ekonomické, politické a právne otázky medzinárodných vzťahov 2016. Zborník vedeckých prác*. Bratislava: EUBA, Faculty of International Relations, pp. 61-66.
- [5] CorD (2016). *Interview: H. E. Li Manchang, Ambassador of the People’s Republic of China in Serbia* [online]. [cit. 2018-2-28]. Available at: <https://cordmagazine.com/interviews/interview-h-e-li-manchang-ambassador-peoples-republic-china-serbia-serbia-joins-new-silk-road/>
- [6] Drapáková, D. (2017). *Stredoeurópsnym rajom pre čínske investície je Maďarsko* [online]. [cit. 2018-2-28]. Available at: <https://euractiv.sk/clanky/investicna-politika/stredoeurpskym-rajom-pre-cinske-investicie-je-madarsko-infografika/>
- [7] Eszterhai, V. (2017). *The presentation of the “16 + 1 Cooperation”* [online]. [cit. 2018-2-28]. Available at: <http://www.geopolitika.hu/en/2017/10/23/the-presentation-of-the-16-1-cooperation/>
- [8] Gabrielová, P. (2012). Western Balkans on the Way to the European Union. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 66-76.

- [9] Grieger, G. (2016). *One Belt, One Road (OBOR): China's regional integration initiative* [online]. [cit. 2018-2-28]. Available at: [http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS\\_BRI\(2016\)586608](http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI(2016)586608)
- [10] Pleschová, G. (2015). Angažovanie Číny v strednej a východnej Európe. Regionálna diplomacia, ktorá sleduje čínske záujmy. In *Zborník príspevkov zo 16. medzinárodnej vedeckej konferencie Medzinárodné vzťahy 2015 Aktuálne otázky svetovej ekonomiky a politiky*. Bratislava: EUBA, Faculty of International Relations, pp. 579-584.
- [11] Pleschová, G. (2015a). *Čína v strednej Európe: Prečo má Čína záujem o Slovensko a jeho susedov?* [online]. [cit. 2018-2-28]. Available at: <http://zahranicnapolitika.dennikn.sk/cina-v-strednej-europe-preco-ma-cina-zaujemo-slovensko-a-jeho-susedov/>
- [12] Pravda (2016). *Obchod medzi Čínou a SR bude rýchlejší, podpísali memorandum* [online]. [cit. 2018-2-28]. Available at: <https://spravy.pravda.sk/domace/clanok/410055-obchod-medzi-cinou-a-sr-bude-rychlejsi-podpisali-memorandum/>
- [13] Sinopsis (2017). *16 + 1* [online]. [cit. 2018-2-28]. Available at: <https://sinopsis.cz/sinopis/16-1/>
- [14] SME (2017). *Po vyše roku smerujú opäť z Číny nákladné vlaky aj cez Slovensko* [online]. [cit. 2018-2-28]. Available at: <https://ekonomika.sme.sk/c/20558871/po-vyse-roku-smeruju-opat-z-ciny-nakladne-vlak-y-aj-cez-slovensko.html>
- [15] Stanzel, A., Kratz, A., Szczudlik J. and Pavličević, D. (2016). China's investment in influence: the future of 16+1 cooperation [online]. *China Analysis*, vol. 199, iss. 8, pp. 1-16. [cit. 2018-2-28]. Available at: [http://www.ecfr.eu/page/-/China\\_Analysis\\_Sixteen\\_Plus\\_One.pdf](http://www.ecfr.eu/page/-/China_Analysis_Sixteen_Plus_One.pdf)
- [16] Szalai, P. (2017). *Komisia avizuje silnejšiu kontrolu čínskych investícií, Slovensko to nerieši* [online]. [cit. 2018-2-28]. Available at: <https://euractiv.sk/clanky/energetika/komisia-avizuje-silnejšiu-kontrolu-cinskych-investicii-slovensko-neriesi/>
- [17] Štalmach-Kušnírová, M. (2016). *Čína má už dve Hodvábne cesty, Slovensko obchádzajú* [online]. [cit. 2018-2-28]. Available at: <https://ekonomika.sme.sk/c/20385330/cina-ma-uz-dve-hodvabne-cesty-slovensko-obchadzaju.html>
- [18] Ziyadin, S., Suieubayeva, S., Kabasheva, N. and Moldazhanov, M. (2017). Economic rationale for the investment attractiveness of China at present. *Economic Annals-XXI*, vol. 163, iss. 1-2, pp. 35-40.

# **The Industrial Policy of the European Space Agency and the Innovative Capacity of Small and Medium Enterprises**

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## **Abstract**

*The European Space Agency (ESA) stimulates the development of the space industry in Europe. Small and medium-sized enterprises (SMEs), which have great potential for development and are the driving force of the European economy, play an increasingly important role in the industrial policy of the ESA. Participation in ESA programs has multidimensional impact on small and medium-sized European enterprises, in particular on increasing their innovation capacity. The aim of the study is to present the main assumptions of the ESA industrial policy towards SME, as well as the ways in which it affects the innovation capacity of SME, understood as the ability to reconfigure internal and external resources and competences of an enterprise in response to fast-paced changes in the environment.*

**Keywords:** European Space Agency, industrial policy, innovation capacity, small and medium sized enterprises (SMEs), space industry

**JEL Classification:** L20, L52, O22, O33

## **1. Introduction**

For over 20 years, the European Space Agency (ESA) has been carrying out its industrial policy for small and medium enterprises (SME) considered to be the most “dynamic, flexible, innovative, as well as highly specialised in technology” (Faix, 2011, p. 50). The purpose of this policy is to increase the SME’s participation in ESA space projects and programmes and to include them into the global value chain of the space industry, in particular through stimulating partnerships between space companies and SME sector entities. Moreover, the participation of SMEs in ESA space projects and programmes generates numerous collateral effects: technological, commercial, related to work organization and methodology, as well as human resources, which are of crucial importance for achieving the goals of the ESA industrial policy on a long-term basis.

Due to the economic and social changes in the international environment, the transformation of the space industry into the industry of the Space 4.0 era, as well as resulting necessity to search for new ways to increase international innovativeness and competitiveness of the European industry, a new approach to ESA industrial policy was proposed in 2016, directed to a greater extent at space projects and programmes with high application potential, taking into greater consideration the spin off technologies which may be applied in other branches of economic activity (especially earth-based applications), as well as stimulating technology transfer and the development of business culture. This approach has been reflected in promoting such initiatives as Industry Space Days, Innovation Triangle Initiative or Business Innovation Centre, which are initiatives bringing together a variety of entities – space

companies, entrepreneurs, space agencies, start-ups, scientific institutions or mutual funds for space industry construction.

The research is based on the assumption that in ESA space projects and programmes, the partners are the enterprises whose competitive advantage is based mainly on technological innovation. The purpose of their activity is to develop technological resources and gaining – and later retaining – technological leadership (Autio, 1997, p. 276). These enterprises play an important role in the economy, which is to catalyse the innovation processes in “innovation networks”, which also include the innovative ecosystem of space industry (Mazzucato and Robinson [online] 2017, p. 26). The ESA industrial policy for SME affects not only the development of resources and technological competences, but most importantly impacts the enhancement of the innovation capabilities of SME, which conditions the transformation of “resources” into a success in the shape of product implementation and retaining the position in the value chain of the space industry.

The purpose of the present research is to present the main assumptions of the ESA industrial policy towards SME, as well as the ways in which it affects the innovation capacity of SME, understood as the ability to reconfigure internal and external resources and competences of an enterprise in response to fast-paced changes in the environment.

Such formulated research project is reflected in the construction of the paper, consisting of three parts, introduction and conclusions. In the research, analysis and synthesis were used interchangeably, as the disadvantages of an exclusive choice of either were acknowledged. The analysis and synthesis were conducted based on official ESA documentation and professional literature on the subject. The character of the research is interdisciplinary and it complies with the global development trend of humanist and social sciences.

Due to the complexity of the subject matter, the present research cannot be considered free of any limitations. The research does not exhaust the complex issue of the ESA industrial policy and its impact. It concentrates in particular on the role and significance of SME in the Agency’s industrial policy, the causes and consequences of such an approach, as well as on the innovation capacity of SME in space industry and the ESA’s ability to influence the innovation capacity of SME. The research was concluded on 28<sup>th</sup> February 2018.

## **2. The ESA Industrial Policy**

The main objective of the Agency, as stated in the ESA convention of 1975, is to ensure and promote the co-operation between European countries as regards research and development of space technologies and their application in space, with the intention of using them for peaceful – scientific – purposes and to employ them in usable operational systems (ESA [online], 1975). Moreover, the Convention establishes that one of the four main objectives of the Agency is to develop and implement the industrial policy coherent with other ESA objectives and the industrial policies of the Member States (ESA [online], 1975). Article VII defines the main assumptions for developing and implementing said policy, founding it i.a. on the principle of cost-effectiveness, market approach, equitable participation of the Member States in ESA programmes proportionally to their financial input, granting preference to industry of all the Member States and free competitive bidding (ESA [online], 1975).

The principles of the ESA industrial policy are elaborated on in Annex V of the Convention, entitled “Industrial Policy”, which presents in particular the assumptions for the bidding system and contractual operations by the ESA, and the rule of geographical division. Both instruments have constitute the pillars of the ESA industrial policy up to the present day. Simultaneously, the Convention guarantees that any additional aims of the industrial policy

may be defined by the ESA Council at any given moment, through unanimous decision of all Member States.

This possibility was used in 1997, when due to the economic and social changes in the international environment, the necessity to increase international competitiveness of European industry and growing (since 1980s) interest in space industry in the EU, the ESA Council passed a resolution to establish the industrial policy (ESA [online], 1997). The resolution gave a new direction to the policy, and small and medium enterprises were granted a special place in the area of defining the technological plan and activity of the Agency.

In 1997, a two-year transitional period was started, with the aim of adjusting the rules of co-financing technological operations to the size of an enterprise and introducing numerous instruments for SME, e.g. expert support and access to ESA laboratories in order to increase the technological competences of SME (ESA [online], 1997). In 1999, by order of the ESA Council, the industrial policy for SME was permanently placed on the ESA agenda. In the same year, changes in the general ESA budget were accepted, introducing a category with the objective of financing the SME policy on a permanent basis (Benamar, 2015). In 2008, by order of the ESA Council and based on the resolution on the evolution of the Agency (ESA [online], 2008), the position of SME in the industrial policy was strengthened, and this group of enterprises was acknowledged as an integral element of the space system in Europe, however requiring a separate, specific instrumentarium. In 2016, the ESA Council accepted an amended policy for SME, based on following principles (Kaufmann [online], 2017):

- using the innovativeness and efficiency of SME for ESA programmes;
- strengthening and developing the industrial base of the Member States;
- supporting SME in challenges typical for this sector, such as i.a. sustainable development, rate of return, access to space infrastructure, data and information, etc.

The instruments available to SME were also provided with details in four categories: General Support Measures, Procurement Measures, Industrial Policy Measures and Financial Measures.

### **3. The Significance of Small and Medium Enterprises in the ESA Industrial Policy**

As mentioned above, the challenges related to innovativeness and competitiveness of industry in Europe, the necessity to search for and create new sources of economic growth and increasing the impact of the European industry on the shaping of global value chains causes the ESA to carry out an increasingly active industrial policy for SME. The factors indicated by M. Mazzucatto and D.K.R. Robinson, such as the necessity to increase the efficiency of space agencies around the world, understood as generating – due to their activity – new workplaces, creating new enterprises and stimulating the economic growth, are not without significance (Mazzucatto and Robinson [online], 2016, p. 6). Another challenge is to include new Member States into the Agency (e.g. the Czech Republic or Poland in 2012), which results in the necessity to include new partners, most importantly from the SME sector, into ESA space projects and programmes.

Directing the ESA industrial policy towards SME is also related to their unique character. SME constitute a particular group of subjects with high potential of development due to their number and the scale of their influence on the economy, i.a. through their ability to create new workplaces. In 2016, 99,8% of all enterprises in the non-financial sector in the EU consisted of SME, employing 67% of all employees and generating 57% of added value in the whole

EU economy (EC, 2017). They are mostly predetermined to the role of an economic development stimulator due to their specific qualities, including i.a. low level of bureaucratization, high tendency for risk-taking or quick reaction to changing conditions in the environment. Their flexibility and tendency to take risks enhance the innovation and commercialization processes within them, as well as condition their participation in risky, from the SME point of view, enterprises. SME are able to respond quickly to changing market conditions and thus can easily adapt to them. They can also carry out effective restructuring more flexibly (Dziwiński, 2016, p. 192).

The ESA has recognized SME as the most “dynamic, flexible, innovative and highly specialized technology-wise” (Faix, 2011, p. 50). Specific qualities of SME are also acknowledged in a report from Ernst & Young, which highlights the fact that they have “unique competences as regards niche production, greater flexibility, lower overall cost and the ability to learn and absorb new technologies” at their disposal (Ernst&Young [online], 2009, p. 1). It is therefore worth noting that the enterprises which participate in space industry in Europe base their competitive advantage mainly on technological innovations. In theory, the key role is assigned in particular to these enterprises’ ability to increase technological competences, which can enable them, if other conditions are fulfilled, sustainable or vicious growth (Lee, 2010, p. 279). The ESA industrial policy towards the SME sector is therefore directed at increasing their innovation capacity and generating the greatest possible number of spin off technologies, which can be applied in the process of producing numerous components and equipment for use in space, but also in earth-based applications, the implementation of which is less costly and time-consuming. Coad and Reid (Coad and Reid, 2012, p. 8) point out the important role of the industrial policy in stimulating diffusion of innovations, propagating technological competences and increasing the absorptive capacity, especially in enterprises of lower level of technological advancement.

The benefits from including SME into ESA space programmes and projects are mutual in character. ESA benefits from the existing technological competences of European SME (Faix, 2011, pp. 49–50) in order to efficiently fulfil its main objectives, i.e. strengthen the competitiveness of the entire European space industry. At the same time, due to the active participation of SME in space projects and strengthening their position in the international arena, the ESA can prove the effectiveness of the actions it undertakes.

#### **4. The Significance of the ESA Industrial Policy for the Innovative Capacity of SME in Space Industry**

Innovative capacity, in literature of the subject also known as capacity to innovate or, less frequently, as innovative potential (which contradicts the so called dynamic innovative capacity paradigm), stems from the theory of resources in an enterprise, which assumes that the competitive advantage is attained by enterprises as a result of using rare and unlimited resources: human, material and capital at their disposal (Wernerfelt, 1995), as well as “dynamic capacities” theory, which means the ability to reconfigure internal and external competences in response to fast-paced changes in their internal and external environment (Teece et al., 1997, p. 515). The resources possessed by an enterprise can be the source of its innovative development, and the success or lack thereof is directly dependent on the ability to utilize them (Teece et al., 1997, p. 515). Szeto (2000) defines innovative capacity as a constant process of improving the enterprise’s general capability to create innovations in order to develop new products to meet the market demand. This capability may be increased in an incremental or radical way due to the enterprise’s participation in operations which activate innovative resources and transform them into a particular knowledge base for the company in

an interactive environment. Caniels and Romijn (2003) point out that innovative capacity can be increased by an enterprise's participation in collaborative networks. Širec and Bradac point out that collaboration with numerous partners is key for the success of SME (Širec i Bradac, 2009, p. 63). Therefore, an important determinant for thus understood innovative capacity is the participation of an enterprise in a collaborative network (Groen, 2005).

Collaborative networks commence in the value chain of space industry. As indicated by Ben Letaifa et al. (Ben Letaifa et al., 2013, pp. 233–234), there is a strong differentiation of subjects in the SME in the global space industry, they are however connected due to focus and organisation of their activity around space programmes and projects (Ben Letaifa, 2013, p. 233). As a result, an enterprise acting as a subsystem integrator in one project can act as a subsupplier of products and services in another project, in this way creating a network of mutual connections and codependencies, as well as organisational structures, which can change in a flexible way and adjust to the needs of a particular project. The issue of networks of mutual codependencies and relations in space industry was elaborated on, among others, by M. Mazzucato and D.K.R. Robinson, who drew attention to its usefulness in the analysis of the “ecosystem perspective” (Mazzucato and Robinson [online], 2016, p. 26). Small and medium enterprises participate in the value chain of space industry mainly as subsuppliers of specialist elements, technologies and Tier IV services, characterized by the highest level of dispersion, the lowest entry barriers, as well as lowest added value (Comparini [online], 2009). Few SME, the most technologically advanced ones, are also engaged in Tier III operations. However, the scale of this occurrence is small, as SME – system integrators generate only 3% of annual turnover in space industry (Comparini [online], 2009). Very rarely do SME migrate between particular levels of value chains, due to a string of internal and external barriers (Antill et al., 2001, pp. 14–15; Faix, 2011, p. 49; Kaufmann [online], 2017). However, due to collaboration with large entities and the Agency itself, SME can build up their innovation capacity, and in particular develop it external dimension based on collaboration networks with the scientific sphere and market collaboration (Autio, 1997, p. 276).

The ways of influencing SME by participation in space projects and programmes can be also described as follows (Bach and Lambert, 1992):

- stimulating technological innovation, leading to a new generation of products and services entering the market and generating other effects in the area of innovation, such as spin off technologies transferred to other sectors of economy, including earth-based ones;
- enterprises stimulating growth in the sales of products and services, conditioned by opening of new markets and creating new business ties between subjects, including outside the ESA;
- stimulating innovation in the area of management processes and new methods of work and production, resulting from transferring, among others, high quality work standards established by the ESA;
- improving the qualifications and skills of the staff employed in ESA space projects and programmes, as well as building interdisciplinary teams of specialists, creating a particular critical mass of knowledge in the European space sector

The ESA industrial policy towards SME thus influences the development of resources and technological competences, but first and foremost it affects the increase in the innovation capacity of SME, which conditions the transformation of resources into innovations which meet the market demand.



## 5. Conclusion

The innovative capacity of SME constitutes one of the most important factors in the development of an enterprise (micro level), is significant to the development of the industry (mezo level) and, as a result, contributes to the economic development of the country and region (macro level). The development of SME innovative capacity is therefore one of the most important objectives of the ESA industrial policy. The ESA is meeting this objective through including an increasing number of innovative, technologically specialised SME into the value chain, thus creating a network of mutual connections and codependencies, building and innovative “ecosystem”, which benefits (should benefit) all the parties involved.

Faced with new challenges to the ESA industrial policy, resulting from internal factors such as admitting new Member States into the ESA, and external, such as i.a. the dynamic growth of the space industry in emerging economies such as China or India, or the necessity to withstand the competition with the USA, it is necessary to maximise the effects of SME’s participation in the value chain of the space industry in Europe.

Due to their collaboration with large entities and the ESA itself, SME can increase its innovative capacity, being subject to a number of effects in the area of innovation and technology, management processes and work organisation, as well as raising the competences of their personnel.

The question remains open whether the innovation capacity of an enterprise increased in this way is enough for the enterprise to build lasting competitive advantage based on technologies.

## References

- [1] Antill, P.D., Moore, D.M. and Neal, D. J. (2001). Supply Chain Management in SME's within the Defence. Aerospace Industry – a case of simplification or increased complexity. *International Journal of Aerospace Management*, vol. 1 (1), pp. 35–45.
- [2] Autio, E. (1997). New, technology-based firms in innovation networks symplectic and generative impacts. *Research Policy*, vol. 26, pp. 263–281.
- [3] Bach, L. and Lambert, G. (1992). Evaluation of the economic effects of large R&D programmes: the case of the European space programme. *Research Evaluation*, vol. 2, iss. 1, pp. 17–26.
- [4] Benamar, K. (2015). ESA SME Industrial policy discussions, *REACH workshop presentation* (ESTEC 22 April 2015).
- [5] Ben Letaifa, S., Gratacap, A. and Thierry, I. (2013). *Understanding Business Ecosystems: How Firms Succeed in the New World of Convergence?* Louvain-la-Neuve: De Boeck Superieur.
- [6] Caniëls, M. and Romijn, H. A. (2003). Firm-level knowledge accumulation and regional dynamics. *Industrial and Corporate Change*, vol. 12, iss. 6, pp. 1253–1278.
- [7] Coad, A. and Reid, A. (2012). *The role of Technology and Technology-based Firms in Economic Development, Rethinking Innovation and Enterprise Policy in Scotland*, Brussels: Technopolis Groop.
- [8] Comparini, M.C. (2009). *Space SMEs in Europe* (presentation) [online]. [cit.2018-02-22]. Available at: [https://www.asi.it/sites/default/files/smeweek\\_comparini\\_11may09\\_final\\_publication.pdf](https://www.asi.it/sites/default/files/smeweek_comparini_11may09_final_publication.pdf).

- [9] Dziwiński, P. (2016). Restructuring of Small and Medium-Sized Enterprises – the European Perspective. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 190–196.
- [10] Ernst & Young (2009). *Enhancing role of SMEs in Indian defence industry* [online]. [cit.2018-02-15]. Available at: <http://www.cii.in/webcms/Upload/Enhancing%20role%20of%20SMEs%20in%20Indian%20defence%20industry1.pdf>.
- [11] European Commission (2017). *Annual Report on European SMEs 2016/2017. Focus on self-employment. SME Performance Review 2016/2017*. Brussels: European Union.
- [12] European Space Agency (1975). *Convention for the Establishment of a European Space Agency* [online]. [cit.2018-02-01]. Available at: [https://www.esa.int/About\\_Us/Law\\_at\\_ESA/ESA\\_Convention](https://www.esa.int/About_Us/Law_at_ESA/ESA_Convention).
- [13] European Space Agency (1997). *Resolution on the European Space Agency's industrial policy (adopted on 4 March 1997)*, ESA/C-M/CXXIX/Res. 1(Final) [online]. [cit.2018-02-01]. Available at: <https://www.esa.int/esapub/bulletin/bullet89/resol89.htm>.
- [14] European Space Agency (2008). *Resolution on the Evolution of the Agency (adopted on 25 November 2008)*, ESA/C-M/CCVI/Res. 4 (Final) [online]. [cit.2018-02-01]. Available at: [https://download.esa.int/docs/LEX-L/Ministerial-Council-Resolutions/Meeting-C-M206\(TheHague25-26Nov2008\)/ESAC-MCCVIRes.4\(Final\).pdf](https://download.esa.int/docs/LEX-L/Ministerial-Council-Resolutions/Meeting-C-M206(TheHague25-26Nov2008)/ESAC-MCCVIRes.4(Final).pdf).
- [15] Faix, M (2011). *A Coherent European Procurement Law and Policy for the Space Sector: Towards a Third Way*. In Hobe, S., Hoffmannová, M., Wouters, J. (eds.), Münster: LIT Verlag Münster.
- [16] Groen, A.J. (2005). Knowledge intensive entrepreneurship in networks: towards a multilevel/multi-dimensional approach. *Journal of Enterprising Culture*, vol. 13 (1), pp. 69–88.
- [17] Kauffmann, J. (2017). *The ESA SME Initiative* (presentation dated 22/09/2017) [online]. [cit.2018-02-03]. Available at: [https://s3-eu-west-1.amazonaws.com/media.sa.catapult/wp-content/uploads/2017/03/29172337/Jens-Kauffmann\\_ESA-SME-Initiative.pdf](https://s3-eu-west-1.amazonaws.com/media.sa.catapult/wp-content/uploads/2017/03/29172337/Jens-Kauffmann_ESA-SME-Initiative.pdf).
- [18] Lee, C. Y. (2010). A theory of firm growth: Learning capability, knowledge threshold, and patterns of growth. *Research Policy*, vol. 39, iss. 2, pp. 278–289.
- [19] Mazzucato, M. And Robinson, D.K.R (2017). *Market Creation and the European Space Agency towards a competitive, sustainable and mission-oriented space ecosystem* [online]. [cit.2018-12-02]. Available at: [https://marianamazzucato.com/wp-content/uploads/2016/11/Mazzucato\\_Robinson\\_Market\\_creation\\_and\\_ESA.pdf](https://marianamazzucato.com/wp-content/uploads/2016/11/Mazzucato_Robinson_Market_creation_and_ESA.pdf).
- [20] Szeto, E. (2000). Innovation capacity: working towards a mechanism for improving innovation within an inter-organizational network. *The TQM Magazine*, vol. 12 iss. 2, pp. 149 – 158.
- [21] Širec, K. and Bradac, B. (2009). How does Networking Impact the SMEs Growth. *Organizacija*, vol. 42, no. 2, pp. 59–66.
- [22] Teece, D.J., Pisano, G. and Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, vol. 18, no. 7, pp. 509–533.
- [23] Wernerfelt, B. (1995). The Resource-Based View of the Firm: Ten Years After. *Strategic Management Journal*, vol. 16, no. 3, pp. 171–174.

## Research on Small Firms' Organisational Culture in European Regional Context

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### **Abstract**

*European enterprises operate in a dynamic social-economic environment. The dynamics of the environment increase the need for changes in the internal environment of the organization. Organizational culture is a very important factor determining the functioning and development of the organization in a dynamic environment of European Union. This study presents theoretical-empirical considerations on the organizational culture of a small companies. Then, the aim of the paper is to present findings of theoretical and empirical studies carried out with the aim of identifying the specificity of the organisational culture of a small company in European regional socio-economic context. The methodology of theoretical and empirical research includes a literature study and statistical analysis. Quantitative research was carried out using the questionnaire method among selected companies in the Silesia Voivodeship (Poland).*

**Keywords:** *dynamic environment, European Union context, organisational culture, small company*

**JEL Classification:** *M10, M12, M14, M21, M50*

### **1. Introduction**

Modern organisations function in a very dynamic European Union context and increasingly unpredictable global environment. Business environment is characterised by such attributes as: complexity, stochasticity and changeability. Cooperation, openness, sharing, trust and interrelation are regarded as the characteristics of a management system in a modern enterprise (Tapscott and Williams, 2011, p. 32). Other characteristics include fast and flexible activity, need for an agile synchronisation of the external and internal environments, and development of an organisation's dynamic capabilities (Koźmiński, 2005, p. 136). The existence and development of organisations is in a sense shifted to the dimension of organisational behaviours which essentially involve the search for a compromise between balance and imbalance, and order vs. chaos. A precondition for an organisation's survival in the environment is its openness to changes (Jeżak, 2016, p.54). In this context, an organisation is heading in the direction of an open, dynamic and flexible system. The internal environment of an organisation, in terms of its primary values, processes and undertaken activities, is determined by organisational culture, which also supports the development of external

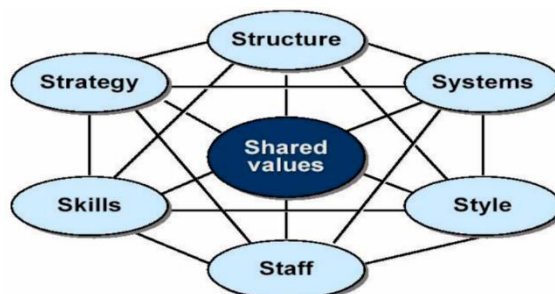
relations (Serafin, 2015, pp. 90-91). Organisational culture determines openness, dynamics and flexibility of the internal structures of an enterprise. The internal environment of an organisation, in turn, determines its ability to create, sustain and utilise external relations. By adopting such perspective, organisational culture can be regarded as a highly important identifier of an organisation, which determines its functioning and development in a dynamic environment.

The aim of the paper is to present findings of theoretical and empirical studies carried out with the aim of identifying the specificity of the organisational culture of a small company in European regional context. The research problem involves analysis of the characteristics of organisational culture which are significant in terms of the functioning and development of a small company. The aim of empirical studies has been to define features of organisational culture that determine survival of a small company in a dynamic environment. The adopted methodology of theoretical and empirical studies is based on literature study and statistical analysis.

## 2. Organisational Culture in the Environment of a Small Company

In studies of management, the subject of organisational culture is widely addressed in the context of undertaken literature and empirical studies. There is a widespread view that every human collective, and an organised one in particular, has a culture. Organisational culture identifies the essence of the activities undertaken by an enterprise. It sets the direction of such activities and gives a meaning to them, creating a kind of "collective consciousness", which is characteristic of any given organisation. In the area of business activity, organisational culture is a system of shared beliefs, values, standards or behaviours of the members of an organisation (Luce, 1984, pp. 40-43). Organisational culture combines the goals, values and beliefs of an individual (employee) and an enterprise. It is regarded as an important attribute of an organisation which impacts its competitive advantage (Barney, 1986, pp. 656-665).

**Figure 1: Architecture of the Model „McKinsey 7-S”**



Source: Tracey and Blood [online], (2012), p. 7.

One of better known and at the same time pioneer approaches in management studies which recognises the prime importance of organisational culture is the so-called "7-S framework" model (also known as "McKinsey 7-S"). This model was developed at the end of the 1970s and the beginning of the 1980s by the consulting company McKinsey (Tracey and Blood [online], 2012, pp. 6-13). The architecture of the model, apart from organisational culture, consists of "hard" elements, which primarily describe the organisational environment of an enterprise, and "soft" factors, which mostly refer to immaterial resources (figure 1).

In the "McKinsey 7-S" model, the central element is identified to be organisational culture, which is expressed in the form of shared values (Pothiyadath and Wesley [online], 2014, pp. 14-16). The other elements are divided into (Pothiyadath and Wesley [online], 2014, pp. 14-16):

1. "hard" elements: strategy (understood as the set of actions by which a company plans to achieve competitive advantage) and structure (which is interpreted as the formal assignment of organizational specializations and authority), and
2. "soft" elements: style (the tangible patterns of the priorities for the managers), skills (i.e. dominating attributes and capabilities in the organization), systems (the processes routine and sets of operations) and staff (people of organization).

Management studies increasingly stress the importance of intangible factors in the context of creation of competitive advantage and development of an organisation's dynamic capabilities. Intangible factors also contribute to value creation. A significant role is played here by human resource management, however in the environment of a small company the HR management is usually minimised (Dzieńdziora and Smolarek, 2016, pp. 183- 185).

Literature highlights a strong relationship between organisational structure and capability of using the potential of intangible assets of enterprises (De Long and Fahey, 2000, pp. 113–127). However, empirical studies on intangible factors (e.g. knowledge management) are conducted more often in large companies and international corporations than small businesses (Hutchinson and Quintas, 2008, pp. 131–154). Studies on Japanese small companies from the Kobe region found that employees' qualifications were the most important determinants of the companies' development (Wijewardena and Cooray, 1995, pp. 87-92), thus clearly confirming the importance of intangible factors. What's more, the character of leadership, which is very important in terms of the functioning of a small company, corresponds closely with organisational culture. Organisational culture is to a large extent shaped by organisation leaders, but its features, at the same time, shape the character of such leadership (Bass and Avolio, 1993, pp. 112–117).

Organisational culture is also interpreted in the cultural context of the country, also related to the diversity of the European Union in which a given organisation carries out its business activity. In this respect, some variation can be seen with respect to the characterisation of companies based on their division into large, medium-sized and small companies. Literature points out that organisational culture of a company is not a natural picture reflecting the cultural context of a given country (Gerhart, 2009, pp. 241-259). More and more often, organisational environment of medium-sized and large companies is so complex, varied and open that the organisational culture of these organisations is heterogeneous. It is stressed that medium-sized and large companies often function in a multi-cultural environment. However, the specificity of the functioning of small companies provokes reflection on the significance of the cultural context of a country. Undoubtedly, the organisational culture of small companies does not directly reflect the culture of a country. However, the impact of the cultural context on the characteristics of the organisational culture of a small company seems to be much bigger than in the case of medium-sized and large companies. Studies in the area of marketing activities lead to the conclusion that socio-cultural conditions are equally important as the macroeconomic environment for the functioning of small companies (Siu, Zhu and Kirby, 2003, pp. 25-39).

Studies of organisational culture of family-run businesses point out the co-existence of sub-cultures: family and non-family cultures, with variation in the areas of integration and formalisation (Sułkowski, 2013, p. 19.). A higher degree of integration and lower degree of formalisation describe the family sub-culture, whereas the non-family sub-culture is less

integrated and more formalised (Sułkowski, 2013, p. 19.). With the organisational environment of a small company viewed from this perspective, it becomes interesting to identify such features of organisational culture that will contribute to the strengthening of internal integration, thus making it possible to limit the formalisation of internal procedures. Organisational culture as a set of fundamental assumptions of an organisation provides a foundation for internal integration within the organisational boundaries of an enterprise, as well as for external integration in the space surrounding the internal environment of an organisation (Schein, 1982, p. 12). It seems that attempts to harmonise the internal organisational system facilitate the development of an organisation's identity. Fundamental assumptions define the specificity of a business, laying foundations for the development of an organisation's competencies. They may underlie the development of an enterprise in a dynamic environment, also in the European Union context. However, if the organisational system is too hermetic and closed, and the organisational culture is rigid and conservative, this may limit development capabilities. Often, formalisation is associated with safety of running a small company. Strictly defined procedures enable full control over undertaken initiatives. However, by adopting such a mechanism of operation, a company may not be able to keep pace with the dynamics of its environment, in which time, speed, and free and spontaneous behaviour more and more often count. Thus, it seems that with the dynamics and unpredictability of the environment, the internal architecture of an organisation and organisational culture should be able to evolve, making it possible to implement changes and, at the same time, shape the foundations for internal and external integration. An organisation faces up changes from its dynamic European and global environment, but, what's very important, it generates changes too. The prospect of creating development opportunities increasingly refers to the need to reconfigure the internal environment of an organisation (Pachura [online], 2017, p. 175). It is worth stressing that the level of an organisation's internal and external integration is identified in temporal and spatial terms. This level reflects the particular stage in which an organisation finds itself (in the context of growth, development, structure of resources, etc.) and its place in the business environment (as competitive position, link in the network, etc.).

### **3. Identification of Organisational Culture in the Light of Empirical Studies**

#### ***3.1 Methodology of Empirical Studies: Presentation of Adopted Research Assumptions***

Empirical studies were conducted as part of the implementation of the project: "Tendencies and challenges in strategic management of small and medium-sized enterprises in Silesian Voivodeship." Quantitative research was conducted using the method of a survey, with a survey questionnaire as the research tool. The survey was conducted from November to December 2016 on a group of small enterprises of Silesian Voivodeship (Poland). The full research sample comprised 309 respondents (table 1).

The aim of the research was to diagnose the organisational culture of small enterprises in European regional context. Empirical studies were focused on the characterisation of the organisational climate, which was regarded as manifestation of organisational culture. Based on subjective feelings of employees, an attempt was made to assess the atmosphere in a company, internal communication and selected factors conducive to an employee's identification with the organisation. The adopted context of the research constituted a basis for

seeking desirable features of organisational culture in terms of the development of a small company's ability to survive in a dynamic environment.

**Table 1: Characterisation of the Research Sample**

<b>full research sample = 309 (100%)</b>	
<b>sex of the respondents</b>	
<b>females</b>	38,5%
<b>males</b>	61,5%
<b>age of the respondents (in years)</b>	
<b>up to 29</b>	21,4%
<b>30-39</b>	25,5%
<b>40-49</b>	42,1%
<b>50-59</b>	7,8%
<b>over 60</b>	3,2%
<b>education of the respondents</b>	
<b>higher education</b>	45,%
<b>secondary school</b>	40,1%
<b>vocational education</b>	14,9%
<b>when the company was set up</b>	
<b>...-1989 r.</b>	12,9%
<b>1990-2000</b>	46,9%
<b>2001-2010</b>	29,5%
<b>2011-...</b>	10,7%
<b>reach of the company's activity</b>	
<b>domestic</b>	50,2%
<b>local</b>	27,8%
<b>regional</b>	16,5%
<b>international</b>	5,5%

Source: Own study

The research question was formulated as follows: what are the effects of building organisational culture in small enterprises? With respect to that question, the following hypothesis was set up: the organisational culture of a small company determines its functioning and development in a dynamic environment.

### **3.2 Results of the Empirical Studies**

Identifying the significance of organisational culture, the respondents mainly indicated such features as: facilitation of the company's functioning on the market (90,0%) and possibility of development (71,5%), which directly confirm the adopted research assumption. In the context of indicating the effects of positive organisational culture, the survey identified, among other things: creation of external relations, dynamics and flexibility of a company's internal structure (figure 2).

According to the respondents, organisational culture has a moderate impact on their loyalty and commitment (3,60)<sup>9</sup>. This impact was rated slightly higher in the group of companies

<sup>9</sup> The research used a 5-point rating scale.

employing up to 9 employees (score of 3,9). The survey evaluated one of the forms of identification with the workplace, i.e. work uniform. Only 22,0% of the respondents indicated the habit of wearing a corporate uniform (it should be noted that this applied to companies with rather larger scale of operation).

**Figure 2: Effects of Building a Positive Organisational Culture in Small Companies**



Source: Own study

Positive atmosphere facilitates cooperation and joint implementation of the goals adopted by a company. The analysis of the data shows that the weighted arithmetic mean of work atmosphere was 3,9. With additional division of companies into those employing up to 9 people and those employing 10 to 49 people, atmosphere at work was rated higher in micro-companies (at 4,2).

Other elements subject to assessment included: motivation system, social activity, and the form and manner of conducting trainings. The average score for these elements oscillated between 3,20 and 3,40, which is a moderate score on a 5-point scale. Effective implementation of an organisation's goals requires appropriate motivation of employees. As the survey shows, almost half the employees of small companies (48,9%) notice the existence of a motivation system. Such a system was rated quite low by the respondents, with the score of 3,40. What's interesting, the motivation system at workplace was rated a little higher by employees in micro-companies - score of 3,70. The form and manner of conducting training were rated similarly (3,20). It can be noticed that the score was higher, at 3,50, in companies employing up to 9 people, whereas in the remaining companies - employing between 10 and 49 people - it was only 2,95. This is not a high score given the fact that by appropriately managing the development of employees an enterprise can achieve a long-term success.

A very important thing in every organisation is appropriate communication, which should not be limited to one-way communication of information. In building the climate of an organisation, it is also important to create possibilities for employees to share their remarks and ideas with superiors and co-workers. For that purpose, cyclical conferences and meetings between the management and employees are held. In the case of small companies, the conferences and meeting were organised in 47,2% of the research group, with the possibilities of communicating remarks, ideas and opinions during such meetings rated at 3,85 (where 5,00



is the highest score). What's interesting, the situation looks a little better in micro-companies, for which the weighted arithmetic mean was 4,0. However, the differences are small, and the higher score for smaller entities may result from the scale of the organisational environment (i.e. it is more possible for more direct relations to exist in small companies).

In the area of communication in the internal environment of an organisation, of importance are, among other things: the degree of consistency of the information that is communicated, the form and direction of the communication of information and the degree of formalisation. The data show that in small companies information is usually communicated indirectly (73,5%), mainly in the verbal form (confirmed by 71,5%). The written form of communication was indicated by only 15,2% of those surveyed (the remaining 13,3% indicated a mixed form). As far as the dominating direction of information flow is concerned, the top-down approach is much more dominant (79,3%). The opposite approach (bottom-down) was indicated by 20,7% of those surveyed. The overwhelming majority of respondents stress inconsistency in the information that is communicated (78,0% of respondents). This phenomenon is especially prominent in micro-companies, where as many as 90,5% of respondents indicated the inconsistent character of information.

### ***3.3 Conclusions from the Empirical Studies***

The studies show that organisational culture plays an important role in small companies in regional and European Union context. It determines the level of job satisfaction, effectiveness, dynamics and flexibility of a small company's internal structures. By supporting the development of external relations, organisational culture helps a small company to function in a dynamic and increasingly unpredictable environment.

Findings of the research show that over half of the small companies covered by the research identify problems in the area of knowledge creation and flow. They include limited possibilities of undertaking creative initiatives and a low level of the effectiveness of motivation systems. These issues are accompanied by a very insufficient degree of using available means of communication that enable information flow and creation of new knowledge.

In small companies, employees' initiatives that facilitate trust-building are especially visible. They include: communicating information about irregularities in the overall functioning of the company and performed processes, responsible behaviour of employees, mutual support, feeling responsibility for the organisation's success, etc. It seems that an important contributing factor is direct communication used in the environment of a small company. However, the dominant top-down approach to information flow and insufficient consistency of communicated information may constitute an obstacle in the process of building a trust-based organisational culture. Another concern is the opinion among employees of small companies about the atmosphere in the workplace, motivation system and possibilities of sharing one's remarks, ideas and opinions.

## **4. Conclusion**

Modern small enterprises operating in the context of the European Union and the global market conditions, in order to survive and achieve success in a dynamic and increasingly unpredictable environment, should be characterised by: innovativeness, creativity, flexibility and adaptability, among other things. The development of capabilities to take initiatives in the area of creation and implementation of innovations, to create and use the potential of creativity, to

reconfigure the internal structures so that they approach open systems, as well as adaptive capabilities is determined, among other things, by organisational culture. In this context, the evolution of organisational culture observed in economic practice seems very interesting. It is worth stressing that there is a recognised need to create knowledge-based culture. Knowledge-based organisational culture contributes to broadly understood innovativeness of organisations, increasing their competitiveness (Skibiński and Sipa, 2015).

Thus, it seems that creation of organisational culture based on such attributes as dynamics, flexibility, openness, trust and creativity is one of key areas of reconfiguration of the internal environment of a small company. The directions of potential reconfiguration include the need to create climate that facilitates changes and intensification of the processes of creation, flow and diffusion of knowledge and skills. A company can create climate, through e.g. a clear and legitimate strategy of its development, innovation-oriented character, human resource management system, system for supporting the flow of information, knowledge and skills, and an open, dynamic and flexible organisational environment.

It seems that the constantly growing role of intangible factors, including aspects of organizational culture, requires further research. At the same time, the directions for further studies require the adoption of interdisciplinary perspectives. The growing importance of international teams in organizations, migration and the specific management practices globalization result in the need to explore new research areas. An interesting fields of research can be also the analysis of relations between organizational culture and global cultural patterns. The growing role of virtualization also causes challenges for research into organizational cultures.

The theoretical and empirical discussion on organisational culture in European regional context as presented in the paper certainly does not exhaust the subject of reconfiguration of the internal organisational environment of a small company. It aims to identify the elements of organisational culture that are characteristic of a small company in the context of the need to develop the capabilities of survival and development in a dynamic European Union and global environment.

## References

- [1] Barney, J.B. (1986). Organizational culture: Can it be a source of sustained competitive advantage? *Academy of Management Review*, vol. 11, iss. 3, pp. 656-665.
- [2] Bass, B.M. and Avolio, B.J. (1993). Transformational leadership and organizational culture. *Public Administration Quarterly*, vol. 17, iss. 1, pp. 112-117.
- [3] De Long, D.W. and Fahey, L. (2000). Diagnosing cultural barriers to knowledge management. *Academy of Management Executive*, vol. 14, iss. 4, pp. 113-127.
- [4] Dzieńdziora, J. and Smolarek, M. (2016). Contemporary challenges of human resources management in small and medium enterprises in conditions of European integration on the example of region Silesia in Poland. In *International Conference on European Integration*. Ostrava: VSB-TU Ostrava, pp. 182-189.
- [5] Gerhart, B. (2009). How Much Does National Culture Constrain Organizational Culture? *Management and Organization Review*, vol. 5, iss. 2, pp. 241-259.
- [6] Hutchinson, V. and Quintas, P. (2008). Do SMEs do knowledge management?: Or simply manage what they know? *International Small Business Journal*, vol. 26, iss. 2, pp. 131-154.

- [7] Jeżak, J. (2016). Rozwój przedsiębiorczości rodzinnej w Polsce na tle tendencji światowych. *Przegląd Organizacji*, vol. 4 (915), pp. 52-59.
- [8] Koźmiński, A.K. (2005). *Zarządzanie w warunkach niepewności. Podręcznik dla zaawansowanych*. Warszawa: PWN.
- [9] Luce, S. (1984). Managing corporate culture. *The Canadian Business Review*, vol. 11, iss. 1, pp. 40-43.
- [10] Pachura, A. (2017). Innovation and change in networked reality. *Polish Journal of Management Studies*, vol. 15, no 2, pp. 173-182. [online]. [cit.2018-02-10]. Available at: <http://www.pjms.zim.pcz.pl/files/Innovation-and-Change-in-Networked-Reality.pdf>.
- [11] Pothiyadath, R. and Wesley, J. (2014). Developing a Measurement Scale for 7-S Framework. *Journal of Business and Management*, vol. 16, iss. 1, pp. 14-16. [online]. [cit.2018-02-10]. Available at: <http://www.iosrjournals.org/iosr-jbm/papers/Vol16-issue1/Version-2/B016121416.pdf>.
- [12] Serafin, K. (2015). Kultura organizacyjna jako element wspierający realizację strategii przedsiębiorstwa. *Studia Ekonomiczne. Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach*, no 222, pp. 87-100.
- [13] Shein, E. (1982). *Organisational Culture and Leadership*. San Francisco: Jossey-Bass Inc.
- [14] Siu, W.S., Zhu, Y. and Kirby, D.A. (2003). The interplay of environment and culture in small firm marketing: a comparative study of the marketing practices of Chinese small firms in Hong Kong and the UK. *Journal of Small Business and Enterprise Development*, vol. 10, iss. 1, pp. 25-39.
- [15] Skibiński, A. and Sipa, M. (2015). Sources of Innovation of Small Businesses: Polish Perspective. *Procedia Economics and Finance*, vol. 27, pp. 429 – 437.
- [16] Sułkowski, Ł. (2013). Elementy kultur organizacyjnych przedsiębiorstw rodzinnych w Polsce. *Przedsiębiorczość i Zarządzanie*, vol. 14, iss. 6, part III, pp. 13-20.
- [17] Tapscott, D. and Williams, A.D. (2011). *Makrowikinomia. Reset świata i biznesu*. Warszawa: Wydawnictwo Studio Emka.
- [18] Tracey, J.B. and Blood, B. (2012). The Ithaca Beer Company: A case study of the application of the McKinsey 7-S framework. *Cornell Hospitality Report*, vol. 12, iss. 7, pp. 6-13 [online]. [cit.2018-02-10]. Available at: <https://scholarship.sha.cornell.edu/cgi/viewcontent.cgi?referer=https://www.google.pl/&httpsredir=1&article=1149&context=chrpubs>.
- [19] Wijewardena, H. and Cooray, S. (1995). Determinants of growth in small Japanese manufacturing firms: Survey evidence from Kobe. *Journal of Small Business Management*, vol. 33, iss. 4, pp. 87-92.

## **Diversification of Eco-Innovation in the EU Member States**

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### **Abstract**

*The aim of the article is to present the results of research on the diversity of the European Union in terms of eco-innovation. Considering the significant impact of eco-innovation on the economic development and competitiveness of the economy, the European Commission has established the Eco-Innovation Observatory. Since 2010, it has been operating as part of the General Directorate for the Environment and publishes the index Eco-Innovation Scoreboard, which shows the eco-innovation of the EU Member States in relation to the EU average. Using classical and positional statistical measures, an analysis of the diversification of the eco-innovation level of the European Union Member States in 2010-2016 was carried out and the trends of changes in this differentiation were identified. In the further part of the article an attempt was made to analyze the distribution of the eco-innovation index. However, based on the results, it was impossible to determine a uniform distribution of variables for the studied period or to determine the concentration for the entire research period.*

**Keywords:** *Eco-Innovation Index, kurtosis, sampling diversity, skewness, statistical analysis*

**JEL Classification:** *Q56, O13, O39, F15*

## **1. Introduction**

### **1.1 Innovation**

Innovations play a significant role in economic growth, which was already noted by the classic of the theory of economic development, J. Schumpeter, who is also the creator of the theory of innovation. He believed that innovation is the basic factor of economic development and the driving force of the economy. The role of innovation over the years is constantly growing and is now more significant than traditional development factors such as land, capital or labour. Although innovations do not play a decisive role in the national and international economic policies, they are a very important element of the sustainable development strategy (Rennings, 2000).

Promoting innovation is a policy goal of the European Union, and the policy itself is aimed at supporting enterprises in implementing innovations and better achievement of social goals, such as economic growth, employment and sustainable development. The Innovation Union is one of the seven flagship initiatives of the Europe 2020 strategy. This strategy is to ensure sustainable economic growth and competitiveness of the economy on a global scale (Kordoš, 2014). Innovation policy is an expensive policy but - if it proves successful - it ensures competitiveness and high profits. On the other hand, introduction of innovations is connected with the risk of failure and high costs. Therefore, it is necessary that the state policy supports innovators.

## ***1.2 Eco-innovation***

In the face of increasing environmental threats and a growing emphasis on environmental protection, economic development based on innovation has taken on a new dimension. Innovations should therefore increasingly be ecological innovations, that is, innovations that serve to reduce the burden on the natural environment, which is associated with economic activity and human existence on earth. Ecological innovations are innovations that aim at reducing the environmental impact of business operations. These are new or significantly improved products, processes, organizational or marketing methods that bring greater benefits to the environment than alternative solutions, as well as, of course, they bring benefits to an enterprise implementing them (Rozkrut, 2014; Ziółkowski, 2008, Kemp, Pearson, 2008, Ottman, 2011). Eco-innovations are also a response to the requirements of the market environment because it is a combination of modern innovative solutions with a concern for the environment.

According to Rennings, eco-innovations are (Rennings, 2000: "all measures of relevant actors (firms, politicians, unions, associations, churches, private households) which:

1. develop new ideas, behavior, products and processes, apply or introduce them and
2. contribute to a reduction of environmental burdens or to ecologically specified sustainability targets."

Eco-innovations are becoming an integral part of modern developed economies. As Kobryń and Prystrom (Kobryń, Prystrom, 2017) write, innovations, especially eco-innovations, have a decisive impact on economic development. Moreover, the importance of eco-innovations is growing and is much bigger than ever before, not only because of the urgency and importance of environmental issues but also because of a political interest in sustainable technologies (Berkhout, 2011). Ecological innovations are also a typical element of the next industrial revolution that we are currently witnessing (Mele, Spena, 2015). Văduva F., Gherghina R., Duca I. showed in their research that the level of eco-innovation affects the level of GDP, although it occurs with a certain delay. This was confirmed by the econometric tools they used (Văduva, Gherghina, Duca, 2017).

Already for a few years, the European Union has been placing a great emphasis on the development of economic innovation in its policy, and for many years it has been setting environmental protection as the primary objective in all activities. It is obvious, then, that eco-innovation had to become an important element of its policy over time. And so eco-innovations have become crucial for both the ecological and industrial policy of the European Union. Nevertheless, as this is an area of the Member States' policies, the EU can only support these actions, it cannot however pursue policies in place of the Member States. Eco-innovations are a means to achieve sustainability of economic development and an instrument for implementing a sustainable development programme in enterprises. They also affect changes in technologies, organization and management towards a more friendly direction for the environment (Urbaniec, 2015; Kobryń, Prystrom, 2017).

## ***1.3 Eco-Innovation Scoreboard***

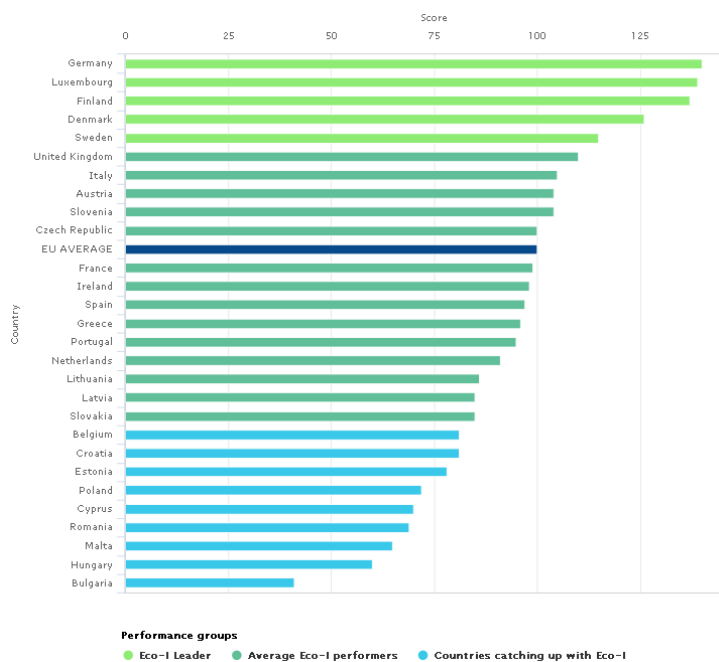
Since 2010 the General Directorate for the Environment has presented the index Eco-Innovation Scoreboard (Eco-IS) for all Member States. It shows how much the level of eco-innovation in the Member States differs from the EU average, indicating at the same time the strengths and weaknesses of each country. Calculating this index, it was assumed that the average level of Eco-IS is 100, i.e. a country with an average level of eco-innovation is a

country with an index of 100. The index close to the average was recorded in 2010 in Italy, Ireland and Spain, in 2011 – in France, in 2012 - in the United Kingdom, in 2013 – in Belgium, in 2014 – in Portugal, Italy and United Kingdom, in 2016 – in the Czech Republic, in 2016 – in the Czech Republic and France.

The index consists of 16 indicators divided into 5 groups showing various dimensions of eco-innovation (see Table 1). Thanks to this shape of the index, various aspects of eco-innovation can be presented. Eco-IS illustrates how the individual EU Member States are doing in various areas of eco-innovation compared to the EU average. The index is an important information for each country about an eco-innovation level (Kobryń, Prystrom, 2017). Eco-Innovation Index gives the opportunity to analyse the impact of the eco-innovation policy on the environment, as well as it gives an answer to the question when and whether a new or improved product or process limits a negative impact on the environment (Berkhout, 2011).

Eco-innovation inputs include investments that stimulate eco-innovation. This applies to both financial investments and investments in human resources. Eco-innovation activities show the activity of enterprises in the field of eco-innovation. Eco-innovation outputs give a picture of the results of eco-innovative activities regarding patents, scientific literature and mass media news. Resource efficiency outcomes refer to the achievements of eco-innovation aimed at saving resources such as materials, energy and water, and the volume of greenhouse gas emissions. Socio-economic outcomes inform to what extent the introduction of eco-innovations gives positive effects from the point of view of social (employment) and economic (turnover, exports) aspects.

**Figure 1: Eco-innovation Scoreboard 2016**



Source: European Commission (2017). Eco-innovation [online]. [cit.2018-01-22]. Available at: [https://ec.europa.eu/environment/ecoap/indicators/index\\_en](https://ec.europa.eu/environment/ecoap/indicators/index_en)

**Table 1: Indicators That Make up the Eco-Innovation Index**

<b>INDICATORS CONNECTED WITH ECO-INNOVATIONS</b>
<b>Eco-innovation inputs</b>
Government`s environmental and energy R&D appropriations and outlays (% of GDP)
Total R&D personnel and researchers (% of total employment)
Total value of green early stage investments (per capita)
<b>Eco-innovation activities</b>
Enterprises that introduced innovation with environmental benefits obtained within the enterprise (% of total firms)
Enterprises that introduced innovation with environmental benefits obtained by the end user(% of total firms)
ISO 14001 registered organisations (per mln population)
<b>Eco-innovation outputs</b>
Eco-innovation-related patents (per mln population)
Eco-innovation-related academic publications (per mln population)
Eco-innovation-related media coverage (per numbers of electronic media)
<b>INDICATORS CONNECTED WITH INTRODUCING ECO-INNOVATIONS</b>
<b>Resource efficiency outcomes</b>
Material productivity (GDP/Domestic Material Consumption)
Water productivity (GDP/Water Footprint)
Energy productivity (GDP/gross inland energy consumption)
GHG emissions intensity (CO <sub>2</sub> e/GDP)
<b>Socio-economic outcomes</b>
Exports of products from eco-industries (% of total exports)
Employment in eco-industries (% of total employment across all companies)
Turnover in eco-industries

Source: own elaboration based on European Commission (2017). Eco-innovation [online]. [cit.2018-01-22]. Available at: [https://ec.europa.eu/environment/ecoap/indicators/index\\_en](https://ec.europa.eu/environment/ecoap/indicators/index_en)

## 2. Methodology

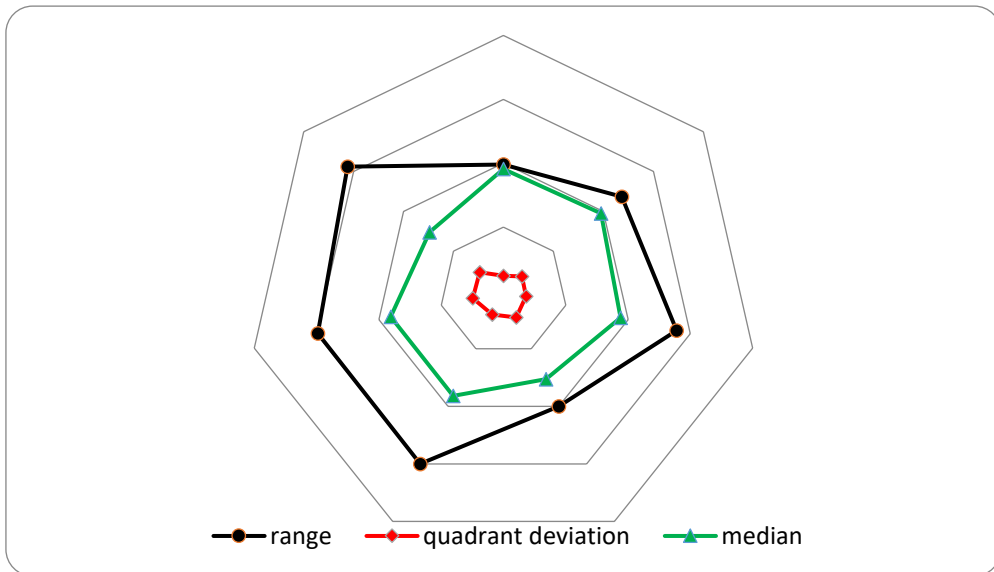
The level of eco-innovation in the EU Member States is characterized by a relatively large diversification (see Figure 1). Such a presentation, however, does not allow us to determine the degree of this differentiation or assess the tendencies of changes over the years. Therefore, statistical calculations have been carried out which allow us, to a certain extent, to answer the questions what is the diversification of the level of eco-innovation in the European Union Member States, and whether this diversification diminishes or increases.

The classic and positional statistical measures were used to present the degree of differentiation of the eco-innovation level. Classic measures are exact measures that do not ignore any of the studied objects, among them two measures were used in the analysis: average and standard deviation. Classic measures can create problems of interpretation when a value deviates significantly from the others. Therefore, classic measures have been supplemented with positional measures, to determine which we take into account not all but the selected values. The analysis was based on range and quadrant deviation (Pułaska-Turyna, 2011). In addition, the distribution of the indicator value was analysed using skewness and kurtosis indicators.

### 3. Problem Solution

The range from the sample is a measure showing the difference between the smallest and the highest value of the indicator being examined. The higher this indicator, the less evenly distributed the level of ecological innovations and the greater is the dispersion of the values of individual countries' indicators around the average level of eco-innovation. The smallest difference is noted certainly when the range is 0, which in practice does not occur. In the case of the European Union Member States, it can be concluded that the range is quite high as it is formed in most of the years of the analysed period at a level higher than the average, i.e. 100. The highest range was calculated for 2010 (156) and 2012 (150). In 2010-2014 there is no tendency to be noted, that is the difference between the most and the least eco-innovative country is growing year by year, the next year it is decreasing, and the following year it is growing again. The situation has changed since 2014 when the range between the most and the least eco-innovative country began to decrease from 139 to 99. It is difficult to say whether it will be a long-lasting tendency, but the next three years of reducing the range are a positive phenomenon. However, the range is still high as it is close to the average.

**Figure 2: Range, Quadrant Deviation and Median**



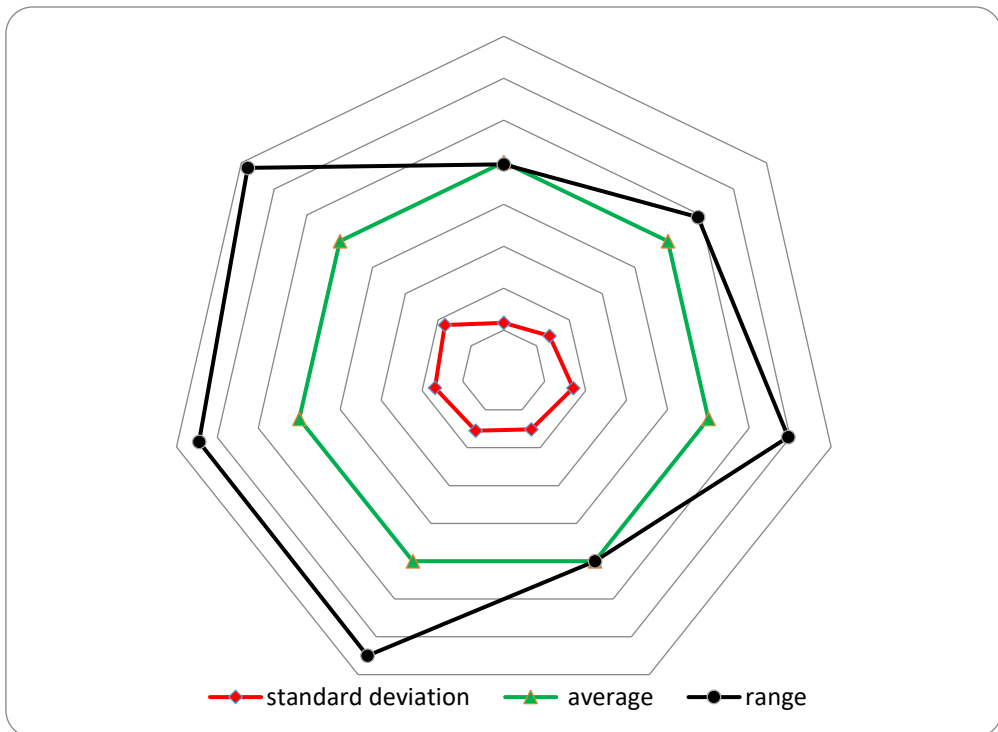
Source: own calculations based on data from European Commission (2017). Eco-innovation [online]. [cit.2018-01-22]. Available at: [https://ec.europa.eu/environment/ecoap/indicators/index\\_en](https://ec.europa.eu/environment/ecoap/indicators/index_en)

An indicator that can tell us a bit more is the quadrant deviation which is equal to half the interquartile range and measures the diversity of only a part of units after rejection of 25% of units with the smallest values and 25% of units with the highest values. Therefore, we receive information on the diversification of the level of eco-innovation, in 50% of the EU Member States at the level closest to the median. It is obvious that the level of diversification of these countries is smaller than all EU Member States. In this case, the decline in the diversification has been observed already since 2013. It is worth noting that in 2016 the diversification among these 50% of the countries is already very small.



Another indicator showing the diversification of the eco-innovation level of the EU Member States is the standard deviation which shows the deviation of the indicator from the average. In the analysed period, the indicator was differentiated at a moderate level and is at a level from 36 (in 2010) to 23.5 (in 2016). Although the highest value is in the initial period, and the lowest value - in the last year, it is difficult to observe any tendencies of a decline in diversification. In 2010-2014, the standard deviation decreased or grew year by year. However, since 2014 it has started to drop significantly. Whether this tendency shall continue - the question remains open. An indicator closely related to the standard deviation is the coefficient of variation. It indicates the diversification of the countries studied in terms of the level of eco-innovation and shows the typical percentage deviation from the average value, i.e. 100. Analysing the level of this indicator, it can be concluded that the variation of the eco-innovation level in the analysed period decreased from a large diversification (above 40%) to medium diversification (25%). In this case, the tendency is confirmed, which on the basis of other indicators can be seen only since 2014, i.e. the diminishing diversification of the level of ecological innovation.

**Figure 3: Standard Deviation, Average and Range**



Source: own calculations based on data from European Commission (2017). Eco-innovation [online]. [cit.2018-01-22]. Available at: [https://ec.europa.eu/environment/eoap/indicators/index\\_en](https://ec.europa.eu/environment/eoap/indicators/index_en)

The analyses conducted so far have allowed us to state the existence of at least an average differentiation in the level of eco-innovation in the EU Member States and the decrease in the level of this differentiation since at least 2014. Further analysis will allow us to answer the

question of how the distribution of the indicator value is shaped. For this purpose, we will use skewness and kurtosis indicators.

The skewness indicator allows us to determine whether the distribution is normal or asymmetrical (left- or right-sided). The left-sided asymmetry means that most numbers are less than the average, while the right-sided asymmetry means that more numbers are larger than the average. On the basis of the calculated indicator, however, it is difficult to determine any tendencies. The indicator is from 1.17 (2014), which shows a very strong right-sided asymmetry, through the indicator close to 0, which shows a very weak right-sided asymmetry, to negative indicators (-0.61 in 2012 and -0.48 in 2011), which reveals a moderate left-sided asymmetry. We do not see any tendencies, either, as we note large changes in the indicator in various directions from year to year. One can only pay attention to an interesting fact that the indicator is the same in the first and last year of the analysis.

The kurtosis indicator shows the concentration of the distribution, i.e. the density of the results around the average value. It answers the question whether the distribution is normal, which means that most values are close to the average. As in the case of the skewness indicator, no tendency of the kurtosis indicator can be observed. In 2010, 2015 and 2016, the indicator is close to 0, so we can say that in these years the distribution of the eco-innovation indicator in the EU Member States was a normal distribution. In 2012 and 2014, the indicator reached a fairly high positive value, which means that the level of eco-innovation focused around the EU average, and countries with extreme values of the indicators are very few.

A statistical analysis does not allow us to characterize the distribution of the eco-innovation index for the EU Member States. One can only say how this indicator was in the particular analysed years.

**Table 2: Skewness and Kurtosis**

	2010	2011	2012	2013	2014	2015	2016
<b>Skewness</b>	0.17	-0.48	-0.61	0.27	1.18	0.49	0.17
<b>Kurtosis</b>	-0.06	0.36	1.21	-1.09	1.44	-0.05	0.09

Source: own calculations based on data from European Commission (2017). Eco-innovation [online]. [cit.2018-01-22]. Available at:

[https://ec.europa.eu/environment/ecoap/indicators/index\\_en](https://ec.europa.eu/environment/ecoap/indicators/index_en)

#### 4. Conclusion

Eco-innovation is a requirement of modern times. Non-innovative economies that do not care about the environment in which they operate and from which they draw the resources necessary for existence have no chance for development, let alone for competing with other economies. In its strategy, the European Union wants to strive to create a competitive and innovative economy, not forgetting about the care for the natural environment. Sustainable development and eco-innovation are the answer to these expectations.

The Member States of the European Union to a varying extent meet the requirements of eco-innovation, which largely depends on the level of their economic development and the development needs of their economies. Therefore, as shown in the analysis, there is at least the average variation in the level of eco-innovation in the European Union. However, as also countries with low ecological innovativeness put an increasingly more emphasis on the need to care for the environment, they also try to introduce the economy onto the path of sustainable

development. Therefore, it seems that the tendency, observed for 3 years, to decrease the diversification of the eco-innovation level is likely to last longer.

## References

- [1] Berkhout F. (2011). Eco-innovation: reflections on an evolving research agenda. *Int. J. Technology, Policy and Management*, vol. 11, nos. 3/4, p. 191-197
- [2] European Commission (2017). Eco-innovation [online]. [cit.2018-01-22]. Available at: [https://ec.europa.eu/environment/ecoap/indicators/index\\_en](https://ec.europa.eu/environment/ecoap/indicators/index_en).
- [3] Kemp R., Pearson A. (2008). *Measuring Eco-Innovation, final report of MEI project for DG Research of the European Commission* [online]. [cit.2018-01-09]. Available at: <https://search.oecd.org/env/consumption-innovation/43960830.pdf>.
- [4] Kobryń A., Prystrom J. (2017), Multi-criteria Evaluation of the Eco-innovation Level in the European Union Countries, *Problemy Ekorozwoju – Problems of sustainable development*, vol. 12, no 2, p. 15-26.
- [5] Kordoš M. (2014), Role of Innovations in the EU Industrial Policy and Competitiveness Enhancement. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics Proceedings, p. 335-342
- [6] Lipková L. (2012), Innovation Policy of the European Union, In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics Proceedings, p. 171-178
- [7] Mele C., Spina T.R. (2015), Eco-innovation practices. *Journal of Organizational Change Management*, vol. 28, no. 1, pp. 4-25
- [8] Ottman J. (2011) *The New Rules of Green Marketing: Strategies, Tools, and Inspiration for Sustainable Branding*, Sheffield: Greenleaf Publishing
- [9] Pułaska-Turyna B. (2011). *Statystyka dla ekonomistów*. Warsaw Diffin.
- [10] Rennings K. (2000). Analysis. Redefining innovation – eco-innovation research and the contribution from ecological economics. *Ecological Economics*, vol. 32, p. 319-332.
- [11] Rozkrut D. (2014). Measuring eco-innovation: Towards better policies to support green growth. *Folia Oeconomica Stetinensia*, vol. 14, iss. 1, pp. 137–148.
- [12] Urbaniec M. (2015). Towards sustainable development through ecoinnovations: drivers and barriers in Poland. *Economics and Sociology*, vol. 8, No 4, pp. 179-190.
- [13] Văduva F., Gherghina R., Duca I. (2017), Orientation of Public Policy by Highlighting the Relationship between Economic Development, Education and Eco-Innovation in EU Countries, *Romanian Statistical Review*, no 3, p. 3-15
- [14] Ziółkowski B. (2008). Znaczenie ekoinnowacji dla rozwoju przedsiębiorstw. In Graczyk A. (eds.). *Zrównoważony rozwój w teorii ekonomii i praktyce*. Wrocław: Wyd. AE we Wrocławiu, pp. 526-534

## **Integration Processes and Cooperation of the European Union Countries in the Scope of Education and Training Policy**

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### **Abstract**

*Countries of the European Union are responsible for their systems of education and vocational training. These systems can fulfill its role only if they provide positive outcomes. National programmes, action plans and strategic frameworks for European cooperation in education and training are important in solving social, economic, demographic, environmental and technical challenges that European inhabitants face and will be facing in the forthcoming years. Firstly, the paper is pointing out the place of education as such in the value-creating chains that are built up by educational institutions. Secondly, paper pins down regional differences in education. These differences hinder balanced regional development and economic growth. The goal of the paper is an analysis of main problems and disparities, differences in the scope of International Standard Classification of Education – level 5 and 6 (tertiary education), using a method called open method of coordination. The comparison is done between Slovak Republic and EU countries.*

**Keywords:** *education, European integration, region, value chains*

**JEL Classification:** *A11, H52, I25, O30, R10*

### **1. Introduction**

According to Chakraborty (2012) and Krishnankutty (2012), the education is one of the most effective tools for lowering the unemployment, social and economic inequalities. It can be effective in increasing the competitiveness of the global economy. Providing the access to quality education for everybody is important and fundamental for economic growth and the development of particular countries (Čekneová, 2016).

National education policy of every European country is confronted by global demands of European education area. Education is becoming a variable which has to face a lot of factors in time and space (rapid development of information technology and its unpredictable growth, changing demographic indicators, changes in conceptions of education systems together with their conceptions of key competencies etc.). (Bobáková, Chylková, 2014; Jakubiec, 2016).

The countries can reach more massive growth if the development of skills is followed by joining global value chains. On behalf of the profit from global value chains, countries have

to fund the education and professional development. Last but not least, they have to improve the use of their skills, coordinate policy in the field of skills more – from the policy of education and migration policy to legal regulations for the protection of employability – and to adjust these policies with industrial and commercial policy (OECD [online], 2017).

The goal of this article is to express and reason the meaning of education and professional development in the value-creating chain of education institutions and present a current state of regional differences in education that prevent a balanced regional development and economic growth. The analysis of the number of expenses for tertiary education, science and research in Slovakia compared to the selected EU countries – Denmark and Finland and their impact on the amount of GDP through which we can measure the efficiency of economics is the parallel goal of this article.

We have chosen Scandinavian countries, such as Denmark and Finland because they belong to the countries with the highest living standards and the fastest economic growth. The amount of GDP in Denmark and Finland always fluctuated above 130 billion €, during our observation period of 2000 – 2013, while the values in Slovakia did not reach even 75 billion € (OECD [online], 2013).

The most important and highly competitive sector in Denmark and Finland is the sector of services. The service sector consists of the industries such as a wholesale and a retail, transportation and warehousing, education, health service, housing and catering, etc. (Ministerstvo zahraničných vecí SR [online], 2015). The high level of education and well-working education system is characteristic for them. Both countries belong to the most successful countries in the education industry. The reason for their success is possibly the fact that Scandinavian countries, among all OECD countries, fund their tertiary education as per one student the most. For instance, annual fees per one student in Finland present 16.714 € compared to the OECD average of 13.528 € (OECD [online], 2013).

The population of Slovakia, Denmark and Finland is approximately the same. Denmark and Finland have just been a proper choice for the purpose of further analyses in terms of the above-mentioned facts.

## 2. Problem Specification and Methodology

The creation of human capital is closely related to the term of education. Funding a human capital presents also the funding of education and various forms of practical training (offered mainly to particular companies) with the aim to improve the workforce skills, knowledge and experience. Both individuals and economy can benefit from these funds in the form of higher salaries and productivity respectively (Josan, 2002).

This statement in theory of human capital is confirmed even by Němec and Kotinková (2003), who claims that education provides knowledge and wisdom to people, who can become more productive for particular organizations, countries, regions and the whole society. The report of Annaby, Hanvey, and Lan (2009) says that funding the education and human capital are the key factors of a long-term growth of particular countries.

Theodore Schultz (1961), Gary Becker - Nigel Tomes (1994) and Jacob Mincer (1958) are one of the most significant economists, who have contributed to solving of the problem. Their analysis were formed into the integrated concept entitled “the theory of human capital”.

Analyzing tertiary education, we focused on the international standard classification of education (ISCED) consisting of ISCED 5-8 levels. We retrieved the necessary data from

Eurostat database from the period of 2000 – 2016. There has not been more updated data on Eurostat at the time of submitting the paper for publication. We processed the acquired data into graphs and tables through MS Excel functions. Visualization of data and performed calculations enabled an easier interpretation and comparison of particular results. Various mathematical and statistical methods were used to achieve the set goal.

The whole set of fundamental conceptional materials related to the development of human resources, ILO References on the development of human resources: education, professional development, and long-life learning no. 195 from 2004, Draft for ILO References on the transition from informal economy to formal economy, a Global program of employability accepted by the Board of ILO Directors in March 2003 was the source of our analysis. The European report “Mind the Gap” was fruitful for this paper because it researches the position of particular regions of EU based on different indicators: 10 regions located on the top positions and 10 regions located on the lowest positions (Ballas, 2012).

### 3. Evaluation and Analysis of the Research Results

In this part of our article, we focused on the analysis of investments in the tertiary education, science and research in Slovakia compared to the average EU-28 and selected countries of Denmark and Finland.

**Table 1: Expenditure on Tertiary Education**

Year	Expenditure on Tertiary Education as % of GDP			
	Average EU-28	Slovakia	Denmark	Finland
2000	1.18	0.80	2.70	2.00
2001	1.19	0.82	2.71	2.00
2002	1.20	0.87	2.70	2.02
2003	1.17	0.85	2.50	2.06
2004	1.16	0.98	2.51	2.07
2005	1.19	0.81	2.38	2.00
2006	1.19	0.90	2.26	1.96
2007	1.18	0.79	2.28	1.85
2008	1.22	0.78	2.17	1.89
2009	1.32	0.81	2.42	2.16
2010	1.32	0.83	2.41	2.18
2011	1.34	0.95	2.43	2.17
2012	1.34	0.93	2.25	2.11
2013	1.33	0.92	2.37	2.11

Source: Own collaboration based on the data of Eurostat, Total public expenditure on education as % of GDP, at tertiary level of education

As we can see in Table 1, Slovakia compared to Denmark and Finland has the lowest expenditure on tertiary education compared to its GDP. The average of EU-28 during the observed period of time has always been fluctuating over the limit of 1.16% of GDP, while the values in Slovakia did not reach even the limit of 1% of GDP. This result only confirms the fact that Slovak higher education is deeply undersized, even though the expenditure on tertiary education has been rising according to the Ministry of Education of the Slovak Republic during the observed period of time (Ministerstvo školstva, vedy, výskumu a športu SR [online], 2013).

There was a change in 2005 when the elections were held in Slovakia. That was a year of pre-election permanent political tension between particular political parties and groups. The result of the recession of governmental expenditures on tertiary education can be assigned to these events. Another event related to this year is the end of the transformation of study programs, based on European credit system (ECTS). The whole process of these changes could influence the transparency of financing in some way, the program changes could easily cause underfunding. The more significant decrease was noticed even in the period of 2007 – 2008, what was the period of great financial and economic crisis. This influenced all the spheres of economy, the education as well. In spite of this, since 2009, the expenditures on tertiary education has recorded the growing tendency. Such a result can be satisfying, because based on the report of the Ministry of Education, Science, Research and Sport of the Slovak Republic entitled “*The report on the state of the education system in Slovakia for the purpose of the public discussion*” from 2013, the Slovak Republic belongs among the EU countries funding the education the least compared to GDP (Ministerstvo školstva, vedy, výskumu a športu SR [online], 2013).

Scandinavian countries, such as Denmark and Finland, compared to Slovakia, belong to the countries with the best results during our observation period (2000-2013) regarding the funding of their education system. They belong to the countries with the highest expenditure on tertiary education compared to the GDP. The amount of expenditure on tertiary education in these countries was highly above the average of EU-28 countries, it exceeded the limit of 2 % of GDP almost every year. Only the period between 2006 and 2008 was an exception when the amount of expenditure on tertiary education in Finland was below the limit of 2%. The reason for such a result can be a financial and economic crisis and a decrease of GDP in Finland in 2008. In spite of this, the value is still high above the average of EU-28.

As for newer data: by the time of submitting of the paper OECD (2018) published the following data of expenditures on tertiary education: EU average was 1.14% of GDP, Slovakia – 0.86% of GDP, Denmark – 1.61% of GDP, Finland – 1.72% of GDP. These data are rather unfavorable compared to previous years.

### ***3.1. Analysis of Expenditure on Science and Research***

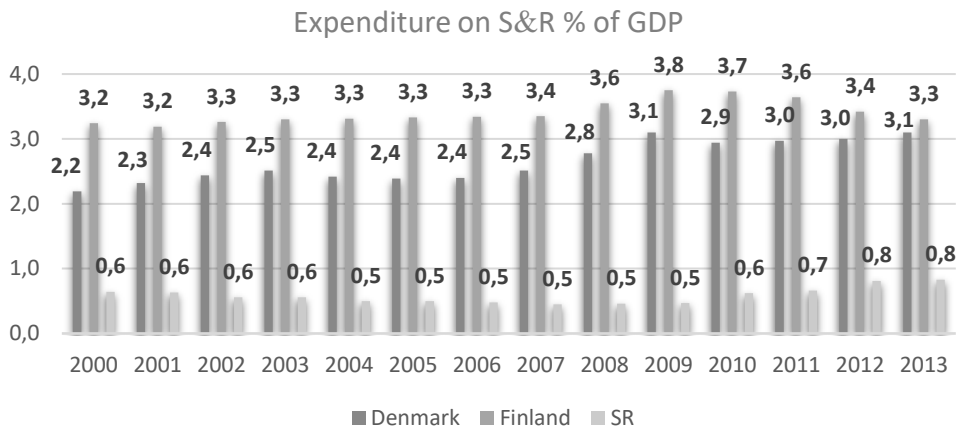
In addition to education universities that are providing tertiary education are involved in the science and research. Not only one complements the other moreover science and research, if successful may improve funding of education. This, partly, demonstrates the value-creating chain and dependency of the two industries.

The European Union pays a great attention to research, development, and innovation. It is believed that through the innovation it is possible to achieve mutual cohesion of European countries and regions as innovations are able to launch development and growth in any type of region using its inner potential (Melecký, Staničková, 2014). In the present globalized world, where all goods are easily accessible, knowledge is considered to be the most strategic good, the main source of competitive advantage for firms and the driver of the economic development of regions. Therefore the support for research, development, and innovation seems to be the best way to achieve cohesion of European countries and gradual European integration (Fránková, 2016).

We compare the amount of expenditure on science and research in comparison to the GDP in the observed countries, as per the Figure 1. The aim is to present the significant differences between Slovakia, Denmark and Finland.

Based on the analysis, we conclude that Scandinavian countries fund their science and research the most among of all EU countries. The expenditures of Denmark on science and research in the observed period was ranging from 2.2-3 % of GDP. Finland succeeded even better result, as their expenditures on science and research exceeded the limit of 3 % of GDP during the whole observed period of time. They reached the highest level in 2009 – it was 3.8 %. In spite of the fact, there was a slight decrease in the following years, Finland belongs to the countries with the highest expenditures in this field.

**Figure 1: Expenditures in Sciences and Research as % of GDP**



Source: Own collaboration based on the data from Eurostat, Total R&D expenditure by sectors of performance as % of GDP; All sectors

The situation in Slovakia is as follows: in spite of the slight increase of expenditures on science and research in recent years, their level is very low compared to Denmark and Finland. The expenditures of Slovakia did not exceed even 1 % of GDP. According to the Eurostat data, other countries funding their science and research in less than 1 % of GDP are mainly Eastern EU countries – Romania, Bulgaria, Poland and Greece.

#### 4. Conclusion

The essential pillar for economic growth can be a high-quality education, well-organized education system, as well as the system effectiveness of science, research, development, and innovations. However, the results of the analysis presented the fact that there are certain negatives regarding the number of expenditures on tertiary education, as well as science and research in Slovakia compared to the selected countries of Denmark and Finland and the average of EU-28.

It is likely sure some changes need to be done to improve the present situation in Slovakia. The possible solution can be:

- Efficient use of European structural funds that can help eliminate regional differences in the field of education, science, and research and to mitigate their negative impact. The successful tool to improve the situation can be the Operational Program Human resources and the Operational Program the Research and Innovations for the program time period 2014-2020.



- Strengthening the integration and intergovernmental cooperation between particular EU-28 member countries. Mentioned cooperation can be realized through the so-called open method of coordination (OMC) which could be applied only at its beginning in the field of employment and economic policy. However, later on, it expanded into other fields, such as the observed fields of education, science, and research and, last but not least, human capital (Radaelli, 2016). Through OMC we can strive for the solution of the unemployment problem that is being a huge problem regarding the creation of human capital.
- Intergovernmental cooperation between particular EU-28 member countries. The possibility of solving the problem offers even the analysis and searching for the reasons of successfulness of other countries, such as Denmark and Finland and following their model.

However, the unanswered question is whether the tools used in countries, such as Denmark and Finland, would work efficiently in Slovakia? It is important to consider that between particular EU-28 countries, there is a significant heterogeneity working the same way even for the education system. Education systems in particular EU member countries are different and work according to various rules. Therefore, the solution of individual problems in the field of education cannot be generalized, but they should be implied according to the conditions and the needs of particular countries.

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### **References**

- [1] Annabi, N., Harvey, S. and Lan, Y. (2007). *Public Expenditures on Education, Human Capital and Growth in Canada: an OLG Model Analysis*. Canada. [online]. Human Resources and Social Development Canada, 2007. [quoted 16.04.2016]. Available on the Internet: <<http://economics.ca/2008/papers/0118.pdf>>.
- [2] Ballas, D. et al. (2012). *Mind the gap: Education inequality across EU regions*. [online]. European Union: NESSE network of experts, 2012. [quoted 11.02.2016]. Available on the Internet: <<http://www.nesse.fr/nesse/activities/reports/mind-the-gap-1>>. ISBN 978-92-79-25980-7.
- [3] Becker, G. S. and Tomes, N. (1994). Human Capital and the Rise and Fall of Families. In *The University of Chicago Press*. [online], 1994, pp. 257-298. [quoted 7.04.2016]. Available on the Internet: <<http://www.nber.org/chapters/c11237.pdf>>.
- [4] Bobáková, H.L. and Chylková, M. (2014). To Some Disparities between National and Global Education in the European Context. In *Proceedings of the 2<sup>nd</sup> International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, pp. 36 – 42. ISBN 978-80-248-3388-0.
- [5] Čekneová, P. (2016). Productivity in the European Union: Do Labour Market Institutions Really Matter? In *Proceedings of the 3<sup>rd</sup> International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 116-124. ISBN 978-80-248-3911-0.

- [6] Eurostat (2016). *Statistics Explained: GDP at regional level*. [online], 2016. [quoted 10. 01.2016]. Available on the Internet: < [http://ec.europa.eu/eurostat/statistics-explained/index.php/GDP\\_at\\_regional\\_level](http://ec.europa.eu/eurostat/statistics-explained/index.php/GDP_at_regional_level)>.
- [7] Eurostat (2015). *Regions in the European Union: Nomenclature of territorial units for statistics NUTS 2013/EU-28*. [online]. Luxembourg. Publication office of the European Union, 2015. [quoted 20.02.2016]. Available on the Internet: < <http://ec.europa.eu/eurostat/documents/3859598/6948381/KS-GQ-14-006-EN-N.pdf/b9ba3339-b121-4775-9991-d88e807628e3>>.
- [8] Eurostat (2015). *Štatistiky vzdelávania na regionálnej úrovni*. [online], 2015. [quoted 12.02.2016]. Available on Internet: <[http://ec.europa.eu/eurostat/statistics-explained/index.php/Education\\_statistics\\_at\\_regional\\_level/sk](http://ec.europa.eu/eurostat/statistics-explained/index.php/Education_statistics_at_regional_level/sk)>.
- [9] Fránková, Š. (2016). Instruments for Innovation Support and Their Classification: an Example of Instruments used in European Countries. In *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 116-124. ISBN 978-80-248-3911-0.
- [10] Chakraborty, K. S. and Krishnankutty, R. (2012). Education and Economic Growth in India. In *MPRA Paper*. [online], 2012, no. 48524 [quoted 2.04.2016]. Available on the Internet: <[https://mpra.ub.uni-muenchen.de/48524/1/MPRA\\_paper\\_48524.pdf](https://mpra.ub.uni-muenchen.de/48524/1/MPRA_paper_48524.pdf)>.
- [11] Jakubiec, M. (2016). Quality of higher education as a factor of European companies' competitiveness—case of Poland-Czech Republic cross-border. In *International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 383 – 390. ISBN 978-80-248-3911-0.
- [12] Josan, I. J. (2002). Human capital investment. In *Manager Journal*. [online]. 2012, vol. 15, no. 1, p. 104-112. [quoted 11.04.2016]. Available on the Internet: <[http://econpapers.repec.org/article/butmanage/v\\_3a15\\_3ay\\_3a2012\\_3ai\\_3a1\\_3ap\\_3a104-112.htm](http://econpapers.repec.org/article/butmanage/v_3a15_3ay_3a2012_3ai_3a1_3ap_3a104-112.htm)>.
- [13] Melecký, L. and Staničková, M. (2014). Regional Efficiency Evaluation by DEA Approach: Comparison of Selected EU15 and EU13 Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 465–475.
- [14] Mincer, J. (1958). Investment in Human Capital and Personal Income Distribution. In *The Journal of Political Economy*. [online]. 1958, vol. 66, no. 4 [quoted 7.04.2016]. Available on the Internet: <<http://www.journals.uchicago.edu/doi/citedby/10.1086/258055>>.
- [15] Ministerstvo školstva, vedy, výskumu a športu SR (2013). *Správa o stave školstva na Slovensku na verejnú diskusiu*. [online]. Bratislava. 2013. [quoted 28.03.2016]. Available on Internet: <<https://www.minedu.sk/data/att/4761.pdf>>.
- [16] Ministerstvo zahraničných vecí SR (2015). *Ekonomická informácia o teritóriu: Dánske kráľovstvo*. [online]. [citované 28.04.2016]. Available on the Internet: < <https://www.mzv.sk/documents/10182/620840/D%C3%A1nsko+-+ekonomick%C3%A9+inform%C3%A1cie+o+terit%C3%B3riu+Nov2015.pdf>>.
- [17] Ministerstvo zahraničných vecí SR (2015). *Ekonomická informácia o teritóriu: Fínska republika*. [quoted 28.04.2016]. Available on the Internet: <

- <https://www.mzv.sk/documents/10182/620840/F%C3%ADnsko+-+ekonomick%C3%A9+inform%C3%A1cie+o+terit%C3%B3riu+Nov2015.pdf>>.
- [18] Ministerstvo práce, sociálnych vecí a rodiny SR: *Operačný program Ľudské zdroje na programové obdobie 2014-2020*. [online]. [quoted 30.04.2016]. Available on the Internet: <<https://www.minedu.sk/operacny-program-ludske-zdroje/>>.
- [19] Ministerstvo práce, sociálnych vecí a rodiny SR: *Operačný program Výskum a inovácie na programové obdobie 2014-2020*. [online]. [quoted 30.04.2016]. Available on the Internet: < <https://www.minedu.sk/operacny-program-vyskum-a-inovacie/>>.
- [20] Němec, O. and Kotýnková, M. (2003). *Lidské zdroje na trhu práce*. Praha: Professional Publishing. 199 s. ISBN 80-86419-48-7.
- [21] OECD (2017). *OECD Skills Outlook 2017: Skills and Global Value Chains*. OECD Publishing, 04 May 2017, Pages: 164. ISBN: 9789264273351 (PDF); 9789264274723 (EPUB) ; 9789264273177(print). Available on the Internet: <http://dx.doi.org/10.1787/9789264273351-en>
- [22] OECD (2018). *Public spending on education (indicator)*. doi: 10.1787/f99b45d0-en (Accessed on 23 February 2018).
- [23] OECD (2013). *Education at a glance 2013: Finland*. [online]. 2013. [quoted 11.04.2016]. Available on the Internet: <[https://www.oecd.org/edu/Finland\\_EAG2013%20Country%20Note.pdf](https://www.oecd.org/edu/Finland_EAG2013%20Country%20Note.pdf)>.
- [24] Radaelli, C. M. (2003). *The Open Method of Coordination: A new governance architecture for the European Union?* [online]. Stockholm: Swedish Institute for European Policy Studies, 2003. [quoted 1.05.2016]. Available on the Internet: < <http://eucenter.wisc.edu/OMC/Papers/radaelli.pdf>>.
- [25] Schultz, T. W. (1961). Investment in Human Capital. In *The American Economic Review*. [online]. 1961, vol. 51, No. 1, p. 1-17. [quoted 7.04.2016]. Available on the Internet: <<http://www.ssc.wisc.edu/~walker/wp/wp-content/uploads/2012/04/schultz61.pdf>>.

## **ERASMUS European Programme as a Tool for Multicultural and Intercultural Education**

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### **Abstract**

*Multicultural education of students has become an important tool of acquiring knowledge, experience and skills in intercultural communication. With the progressive integration process in Europe and the globalization trends in the world economy, there is an increasingly busy and intensive contact between the inhabitants of countries with different cultural and historical backgrounds, history and present in the European and world economic and social world. Europe as a continent has a multicultural character with a high degree of cultural diversification. This is mainly due to the free movement of people, work mobility, study and educational stays, but also due to illegal mobility. Encountering different cultures, citizens are taught to respect and tolerate each other, exchange visions, experience and mutual enrichment. The above-mentioned aspects are the most important topics of the ERASMUS. It is open to all states of the European Union and their students, teachers and university researchers. The paper analyses the extent to which different states use the programme.*

**Keywords:** ERASMUS European programme, intercultural communication, multicultural education

**JEL Classification:** F68, F530, Y10

### **1. Introduction**

Respect for cultural diversity and tolerance are considered to be the guarantor of international security and cooperation among European nations. Global cultural diversity and intercultural dialogue have become major challenges for a global order based on peace, mutual understanding and respect for shared values, such as human rights protection and promotion of linguistic diversity (Krzyzanowski and Wodak, 2011; Levi-Strauss, 1999). Language diversity is one of the most characteristic features of the European Union, affecting not only the social, cultural and professional life of its citizens but also the economic and political activities of their member states (Vogiatzis, 2016; Bobáková, Chylková, 2014; Skokan, 2012).

Respect for linguistic, religious and cultural diversity is enshrined in Article 22 of the European Charter of Fundamental Rights adopted in 2000 (c 364/1, 2000). Multilingualism is very important for the functioning of the European Union and its importance is underlined by the independent function of the Commissioner for Multilingualism. In its Communication "The New Framework Strategy for Multilingualism in 2005", the European Commission underlines the need for the linguistic competence of European citizens and reports on the benefits of multilingualism for intercultural dialogue. Among the important measures of this strategy, it underlines support for the teaching and learning of foreign languages through cooperation

programs on education, training, youth, citizenship and culture (COM 596, 2005). The European Union has so far submitted a number of variable programs (COM 242, 2007) for students from secondary, tertiary and higher education institutions and programs intended for further vocational and tertiary education. Such major programs include Youth in Action, Culture, Europe for Citizens. Furthermore, the Lifelong Learning Program, which successfully followed Socrates, Leonardo da Vinci and others.

The most visible tool of the European Union's education and training policy in the current programming period 2014-2020 is the Erasmus + program. This program integrates the previous Lifelong Learning Program, Youth in Action, or Tempus (European Commission [online], 2014a, 2014b). Erasmus + is divided into key events (KA 1-3). KA 1 Educational mobility of individuals where activities such as Erasmus or Leonardo were included. KA 2 includes Cooperation on Innovation and the Exchange of Best Practices. KA 3 Support for Education Policy Reforms includes the activities of the former Youth in Action Program (The House of Foreign Cooperation, 2017). The objective of the Erasmus + program is to contribute to the achievement of the Europe 2020 objectives. Above all, these are the basic objectives of growth, employment, social equality and inclusion, as well as the EU Strategic Framework for Education and Training the preparation of ET 2020 (European Commission [online], 2017).

Specific actions related to language education, especially the improvement of language teaching and learning and to improve the EU promotion of linguistic diversity and multicultural awareness (Erasmus + Manual, 2016). According to Jirásková (2006), multiculturalism reflects the ideal of respecting the differences and differences of individuals and entire cultures and their mutual tolerance. Šimková and Zajíc (2010) understand multiculturalism as a state where people living in different cultural circles live together. And they can freely express this cultural difference.

Kořátková (2014) defines the differences between multi-culture and intercultural. Multicultural coexistence is one where minorities try to preserve their cultural features but respect differences, while intercultural coexistence is such if minorities adapt to the majority society, and cultural norms of both societies are slowly becoming intertwined. Multicultural resources help to spread the idea. Multicultural education and intercultural education are the most frequently used. Multicultural education refers to language education of children and youth, but also the entire society.

## **2. Problem Formulation and Methodology**

The aim of the paper is to present the Erasmus + program, its individual support. The willingness of young European generations, students and academics, especially those neighboring the Czech Republic, travels to another country within the European Union. A partial goal is to compare major universities and colleges and find out how this program is being used, what is the mobility of university students in the Czech Republic. Another goal was to find out whether young university educated people are ready to migrate for work within the framework of European Mobility.

Qualitative research includes analysis of secondary data, such as annual reports of the European Commission's long-term intentions of the European Commission, or from data provided by the House of international cooperation. All these institutions have annual reports and detailed statistics on the exits and mobility of students or academics.

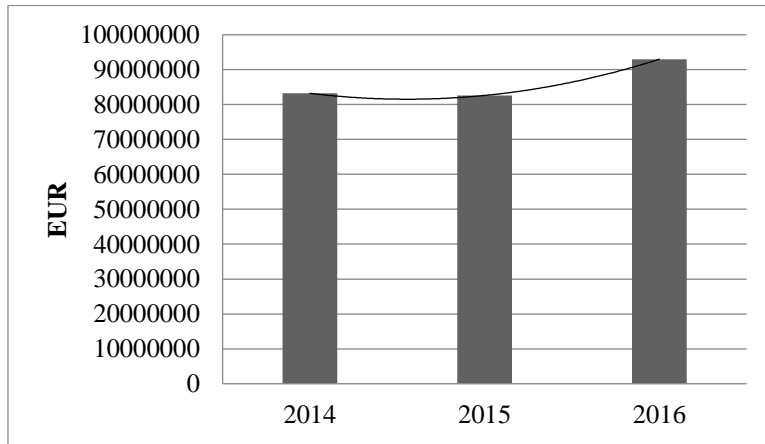
In the analysis we used data on the number of students and employees at individual academic levels. The most relevant use of the secondary data analysis is shown in the analysis of

Erasmus+ 2016 Budget and Commitment, sector Education and Training, part Higher Education. These statistics represent a basic source of information for analysis in the present paper. For the sake of clarity, only Visegrad Four states were used.

### 3. Problem Solution

Erasmus is the world’s most successful student mobility programme. Since it began in 1987-99, the Erasmus programme has provided over three million European students with the opportunity to go abroad and study at a higher education institution or train in a company.

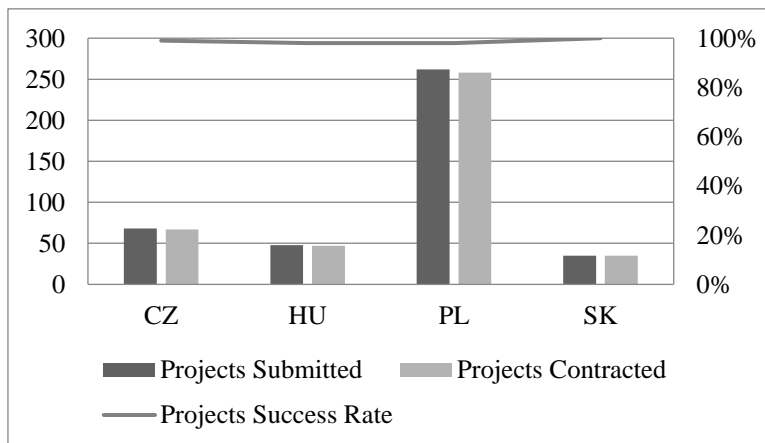
**Figure 1: Higher Education – EU Commitments**



Source: EU Open Data Portal [online], 2016, 2017

Fig. 1 illustrates the amount of financial resources earmarked by the European Union for the field of student and academic mobility for higher education (Sectoral Education and Training, part Higher Education). As can be seen in the picture, the amount of funds raised for the challenge in 2016 by almost 10 million Euros.

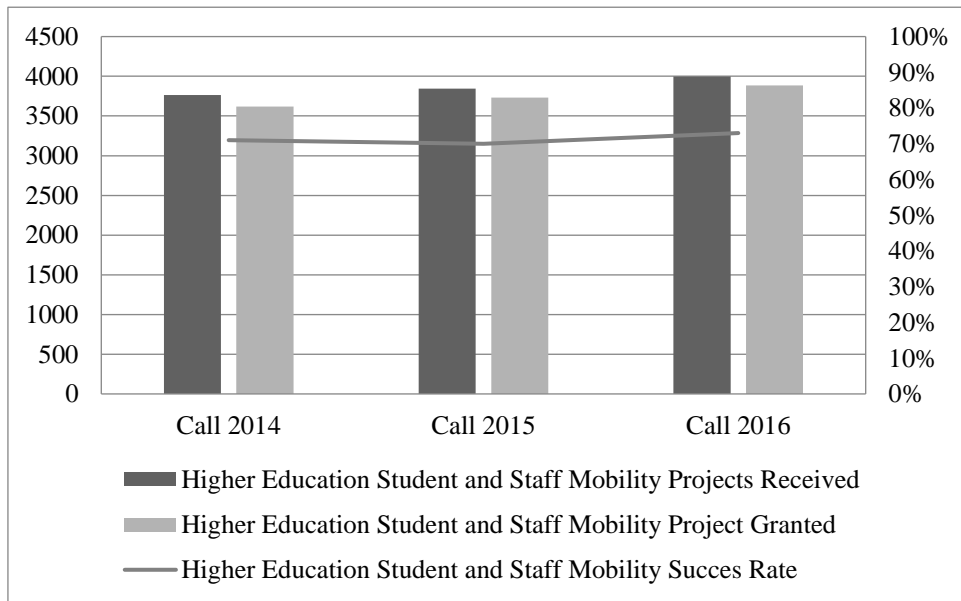
**Figure 2: Higher Education Projects, 2015**



Source: EU Open Data Portal [online], 2017

Fig. 2 gives a closer look at the situation between the V4 countries. Most of the projects have been submitted by Poland and are keeping up with the trend as in previous years. A total of 262 projects were submitted in 2015, with 258 supported. The success rate is 98%. The Czech Republic had 68 projects with 99% success rate, Hungary had 48 projects with 98% success rate and Slovakia 35 projects with a success rate of 100%.

**Figure 3: Higher Education Student and Staff Mobility**

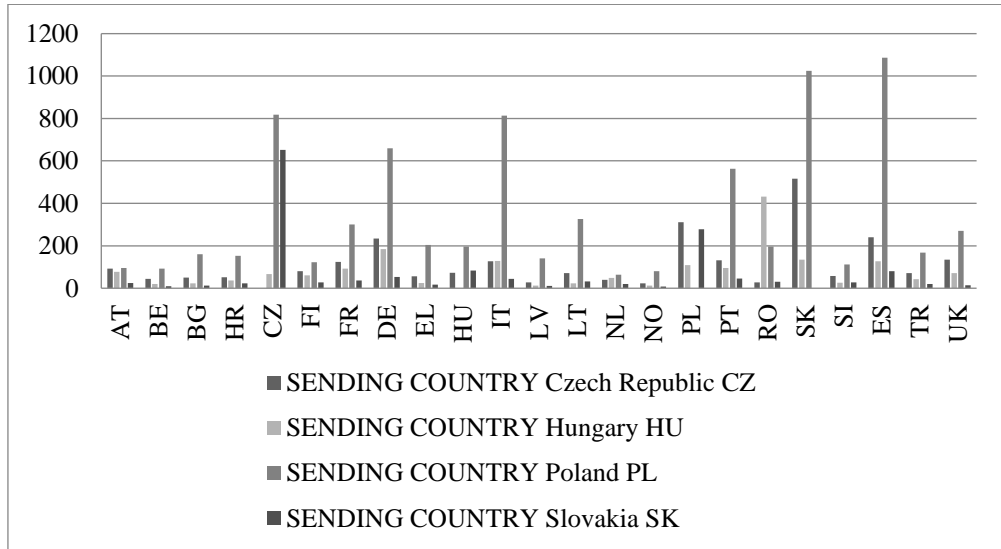


Source: EU Open Data Portal [online], 2016, 2017

Staff mobility for teaching has become a very popular action since its introduction in 1997. With the creation of the Lifelong Learning Programme in 2007, staff mobility was extended to include staff training as well as the possibility for higher education institutions to invite staff from companies to come and teach at their institutions.

Figure 3 shows the number of submitted and supported projects for all countries under ERASMUS in the part for universities in 2014-2016. As can be seen, the number of projects submitted has a growing tendency over the period under review. The success rate is around 70%.

**Figure 4: Higher Education Mobility Within Programme Countries – Staff, 2015**



Source: EU Open Data Portal [online], 2017

Figure 4 shows the numbers of people who spent abroad on staff mobility. Poland sent the most staff abroad from all countries, not only V4. In 2015 it was 7 981. Of the Czech Republic, there were 2 760 academics from Hungary 1928 and Slovakia 1 590. For each country surveyed is the top receiving country different. Czech academics spent time on teaching assignments or training most in Slovakia during the reference year (18.73%), Poland (11.27%) and Spain (8.7%). For Hungarians was the top receiving country Romania (22.41%), Germany (9.54%) and Slovakia (7%) in 2015. Polish academics spent the most time in Spain (13.61%), for Slovakia (12.84%) and Italy (10.19%). For Slovakian academics were the most visited countries the Czech Republic (41.01%), Poland (17.48%) and Hungary (5.22%). Teachers taught the most in English, with the exception of the Czech Republic and Slovak, where they could teach in their mother tongues due to linguistic similarity.

#### 4. Conclusion

It is increasingly difficult for European countries to find the rules of conflict-free coexistence between European and non-European cultures, ethnicity and religion, and thus to cope with the multicultural environment. The aim of the EU is therefore not to eradicate these cultural differences but to promote, preserve and honor them. It is this diversity and intercultural dialogue that have become a major challenge in a global organization that is based on mutual respect for shared values and the promotion of linguistic diversity. These are the main features of the new Erasmus + Education Program. Erasmus + is the European Union's education program valid for the seven-year period 2014-2020 with a budget of € 14.7 billion. Its foundations are based on thirty years of experience in the existence of European educational programs. The Erasmus program provides students with internships abroad, while supporting individuals from the university environment and companies interested in lecturing at universities abroad. Over the past 25 years, student mobility has employs more than 2.7 million students.



The main objective of this program is to reduce unemployment, especially among young people, thus contributing to 75% of employment in the 20-65 age group. However, it is true that mobility has a positive effect on individuals and their application to the labor market. Students who have a foreign experience have more than 70% better skills for applying on the labor market than students than this experience. This is what the EU wants to achieve by investing in developing career counseling and consulting services, promoting job opportunities, foreign internships, learning and entrepreneurship. The aim of the new program is to enable at least 20% of university graduates and 6% of people aged 18-34 to complete a basic training course abroad. Another objective is to support adult education. This, however, appears to be a different target for EU countries. In some countries, this is an increase of 1.4% for other countries by 31.6% compared to the original state.

The benefit of this program is indisputable. Foreign mobility is important for personal development and reinforces human capabilities and employment. People acquire new knowledge, new competencies. Mobility, among other things, removes barriers between people and groups and creates a sense of European citizenship. Those who graduate from mobility are more open to new challenges and changes, more tolerant and more interested in European integration. Mobility promotes multicultural society and encourages them to study the foreign languages that are so necessary for the good functioning of the single market. Equally important is mobility for researchers, allowing for the unique transfer of information and experience, improves the potential for innovation to ensure pan-European competitiveness.

## **References**

- [1] Bobáková, H. L. and Chylková, M. (2014). To Some Disparities between National and Global Education in the European Context. In International Conference on European Integration 2014, Ostrava: VŠB-TU Ostrava, pp. 36-42.
- [2] COM, (2007). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a European agenda for culture in a globalizing world. COM (2007) 242 final. Brussels: Commission of the European Communities
- [3] COM (2005). Communication from the commission to the council, the European parliament, the European economic and social committee and the committee of the regions. A New Framework Strategy for Multilingualism. COM (2005) 596 final. Brussels: Commission of the European Communities
- [4] EU Charter of Fundamental Rights (2000). Official Journal C 364. Brussels: European Commission.
- [5] European Centre for the Development of Vocational Training. (2015). Analysis and overview of national qualifications framework developments in European countries Annual report 2014. Luxembourg: Publications Office of the European Union.
- [6] European Commission. (2017). Information. Goals. [online]. [cit. 2017-04-15]. Available at: [http://ec.europa.eu/programmes/erasmus-plus/about\\_cs](http://ec.europa.eu/programmes/erasmus-plus/about_cs)
- [7] European Commission (2014a) European Day of Languages: diversity's in our DNA [online]. [cit.2018-03-08]. Available at: [http://europa.eu/rapid/press-release\\_IP-14-1035\\_en.htm](http://europa.eu/rapid/press-release_IP-14-1035_en.htm)

- [8] European Commission. (2014b). Erasmus+. The EU programme for Education, Training, Youth and Sport 2014-2020 [online]. 2014 [cit. 2018-02-22]. Available at: [https://ec.europa.eu/programmes/erasmus-plus/sites/erasmusplus/files/erasmus-plus-indetail\\_en.pdf](https://ec.europa.eu/programmes/erasmus-plus/sites/erasmusplus/files/erasmus-plus-indetail_en.pdf)
- [9] EU Open Data Portal. (2017). Erasmus+ 2016 Annual Report Statistics Annex. [online]. [cit.2017-01-22]. Available at: <http://data.europa.eu/euodp/en/data/dataset/erasmus-plus-2016-annual-report-statistical-annex>
- [10] EU Open Data Portal. (2016). Erasmus mobility Sstatistics [online]. [cit.2017-01-22]. Available at: [https://data.europa.eu/euodp/repository/ec/dg-eac/erasmus-data-2013-2014/erasmus-fft-brochure\\_online\\_en\\_FINAL.pdf](https://data.europa.eu/euodp/repository/ec/dg-eac/erasmus-data-2013-2014/erasmus-fft-brochure_online_en_FINAL.pdf)
- [11] Jirásková, V. (2006). Multicultural education. Praha: Epocha.
- [12] Kořátková, S. (2014). Child and Kindergarten: What parents should know, teachers to respect and develop, 2nd edition. Praha: Grada. Pedagogika (Grada).
- [13] Krzyzanowski, M., Wodak, R. (2011). Political strategies and language policies: The european union lisbon strategy and its implications for the EU's language and multilingualism policy. *Language Policy*, 10(2), 115-136. 10.1007/s10993-011-9196-5
- [14] Lévi-Strauss, C. (1999). Race and history. Brno: Atlantis.
- [15] Průcha, J. (2011). Multicultural education. Praha: Triton.
- [16] Skokan, K. (2012). European Integration in Higher Education in the Czech Republic. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 296-302.
- [17] Šimková, S. and Zajíc, J. (2010). At the crossroads of cultures, or, Roma, Vietnamese and Chinese among us. Praha: National Institute of Children and Youth.
- [18] The House of Foreign Cooperation. (2017). Erasmus + Basic information [online]. [cit. 2017-02-22]. Available at: <http://www.naerasmusplus.cz/cz/o-programu/>.
- [19] Vogiatzis, N. (2016). The linguistic policy of the EU institutions and political participation post-lisbon. *European Law Review*, 41(2), 176-200.

# **The EU Standardization Policy in the Optics of Regional Economic Integration and Globalization**

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## **Abstract**

*The aim of the paper is to analyze the evolution of the EU standardization policy (EU STP) and the potential impact of economic globalization trend on EU STP. Inter-relations between standardization, international (regional) economic integration and economic globalization are complex; at present, potential changes are expected, however, not yet sufficiently crystalized to be correctly identified. The analysis of specific features of the EU STP depends on a correct evaluation of the current globalization trends. Our analysis is based on a hypothesis that in the long run, international standards development will be going on more slowly (due to the partial de-globalization), and the EU STP will have to be partially modified.*

**Keywords:** EU standardization policy, globalization, standardization

**JEL Classification:** F02, F69, 039

## **1. Introduction**

The paper deals with the evolution of the EU standardization policy (EU STP) and the potential impact of economic globalization development trend on EU STP. Inter-relations between standardization, international (regional) economic integration and economic globalization are complex; at present, potential changes are expected, however, not yet sufficiently crystalized to be correctly identified. The analysis of specific features of the EU STP depends on a correct evaluation of the current globalization trends.

The primary objective of our research was the potential modification of the EU standardization policy under the influence of the changing trend of internationalization and globalization. The paper was designed as a research and argumentative study based on an analysis of academic literature and available EU documents. These documents partially reflect discussions, contradictions, barriers and limits to further international co-operation. Our analysis is based on a hypothesis that in the long run, international standards development will be going on more slowly (due to the partial de-globalization), and the EU STP will have to be partially modified.

### **1.1 Survey of Literature**

The survey of literature on standardization has to begin with information on the history of standardization described in a paper of A. Russell (2017). As for standards definition, only the selected sources from numerous sources are to be recommended (for example, The Cambridge Dictionary. Standardization, 2017). As for types of standards, it is important to distinguish technical standards from organizational standards (Analytic Quality Glossary, 2017), and service industry standards (ISO Strategy for services. Case Study. May 2016, p. 2), which

include services for financial markets' infrastructure - for example: accounting standards (IAS, 2017), reporting standards (IFRS, 2017) etc. An ISO- definition of services high-lights the relation of servicing industries to financial markets infrastructures (ISO/IEC Guide 76:2008, Development of service standards.), i.e. it explains the interconnectedness of both categories. A new list of international standard-setters has been recently published by FSB (FSB. Standard - Setting Bodies in the Compendium. FSB 2017.) For unknown reasons, International organization for standardization (ISO. org., 2017), was not included into the list of 14 leading international standard-setter. A comprehensive list of ISO-standards was published in 2015 (International Classification for Standards, 2015). Older classification standards are available in the following sources: the complete standards classification by Baynard (1982), Bonino & Spring (1991), Cargill (1990), Coles (1949, pp. 115–117), David (1995a, pp. 211–217), and Le Lourd (1992, p.14), and a classification by de Vries H.J. (1999). Mutual relations between globalization and standardization were analyzed by Purcell, Donald, Kushnier, Gary (2016). The relation between standardization and globalization is very close: to be able to enter the international and more and more market, export product have to be standardized; standardization is an important factor supporting globalization. Globalization, in turn, is an important driving-force of standardization. The cited authors defined impact of standardization on the policy of standardization as well: the relationship between globalization and standardization is, or should be, a critical area of understanding for policy makers all over the world. A paper written by Pavlat (2014) proposed standardization to be included into financial markets infrastructures in a broader sense, i. e. as one of the necessary conditions for financial markets functioning. Barriers to the process of standardization and standard-setting (characterized as “pitfalls” were analyzed by Pavlat (2016).

## **2. Problem Formulation and Methodology**

The aim of the paper is to analyze the expected modifications of the EU STP after 2020.

The methods of description and classification are used to present the characteristic features of the EU STP since 2012 (which is a benchmark for a new actual shape of the EU STP.) Comparative analysis is applied to identify both the influence of the elements of transition from industry 3.0 to 4.0 models and a possible impact of the changing trend of globalization on the character of EU regional economic integration. This expectation is based on the assumption of mutual interactions of globalization, integration and STP. A hypothesis of a slower speed of EU integration was set up based on the actual discussions about different possible globalization trends.

## **3. Findings**

In the first part of Findings, selected relevant literature about standardization is commented. Than two research hypotheses are presented based on a model of relations between EU standardization policy, economic globalization and international economic integration.

### **3.1 First Part**

The 1<sup>st</sup> part of Findings is based on selected literature. In spite of the fact that discussion on the concepts of globalization, internationalization, regional integration and standardization has been going on for decades, no common consent still exists (except for general definitions). For illustration of controversies two examples from academic literature were selected: 1. the paper written by Scharpf (1994) reflecting the endless discussion on the final shape of “United Europe”; 2. the paper reflecting the ideas of marketing experts on the brand marketing strategy significance for globalization (Douglas, Wind, 1987). Academic characteristics of

globalization were gradually changing; they were frequently modified. However, as for international economic integration (regional integration), the theoretic foundations of this important process elaborated by Balassa (1961) in the sixties, are still accepted by many authors. What has substantially changed in the research of all above mentioned categories is the attempt to elaborate a multi-dimensional approach which gives a possibility to find a deeper insight of different aspects of globalization. Another new feature of research consists of different attempts to apply an inter-disciplinary research.

Before two research working hypothesis will be set up, let us briefly characterize important relations between the EU Standardization Policy, Economic Globalization and International Economic Integration (although relations were not – per se - the object of author's paper).

Generally speaking, the standardization policy can be characterized as a part of economic policy by means of which a state regulation of technical, economic, financial and other types of standards is implemented. To be binding for entrepreneurial subjects, a standardization policy must be incarnated in a legal form. Therefore, the EU Standardization Policy could be characterized as a set of legal regulations regulating the standard-setting processes, their implementation and other related activities.

Economic globalization can be understood as a process of growing mutual relations between economic subject localized in different states which is manifested through a world-wide growth of international trade, international financial markets and international mobility of labor.

International economic integration (on a macroeconomic level) is often characterized as a process of economic interpenetration between national economies of different states which is supposed to stimulate creation of bigger economic entities – integration communities such as Common Markets etc.

In general, economic globalization as a dynamic process stimulates creation of bigger economic entities (on the level of big world-wide firms and on the level of a group of states as well), i.e. is a process leading to creation of the future world economy.

The EU Standardization Policy based on EU standards' regulation aims at a growth of EU economic coherence, and – if correct – stimulates the world-wide economic globalization.

This model of relations between the above three components is feasible in the upward phase of economic cycle; in the downward phase of the cycle, these relations most probably are not fully workable. A different model should be elaborated based on experience of the last world crisis attempts to apply an inter-disciplinary research.

In this paper, the following two simplified general hypotheses – as a basic approach to analysis – are applied: 1. Standardization (ST) is one of necessary conditions for international economic (regional) integration (and for economic globalization (GL) as well; 2. The GL has a feed-back impact on the international economic (regional) integration (its existing form of EU included), *ergo* GL has an impact on EU STP as well. In this paper, the *economic dimension* of internationalization and GL are referred to.

### 3.2. The Second Part

In this part the main steps of the EU Standardization Policy development based on official documents are presented. The selected important institutions involved in the world-wide standardization process are enumerated and characterized.

The 2nd part of findings presenting results of own analysis is based mainly on selected EU documents related to EU STP. Since the beginning of the 2nd decade of our century, the EU STP has been gradually formed and upgraded. This process can be characterized by the following steps (marked by main EU documents): 1. Single Market Strategy (Single Market Strategy, 2012); 2. The Regulation (EU) No 1025/2012 adopted in October 2012 aiming to improve the procedure involved in setting European standards to make it faster and more inclusive (The Regulation (EU) No 1025/2012); 3. Joint Initiative on Standardization (2016) is a vision for a single and efficient standardization policy (Joint Initiative on Standardization, 2016); 4. The Annual Union Work Program for European standardization identifying strategic priorities for European Standardization for the upcoming year. "The program lays down the Commission's intentions to use standardization in support of new or existing legislation and policies". (The Annual Union Work Program for European standardization for 2018; 2017); 5. Notification (EC. Europa (2012). Notification System\_[online].). These documents are relatively independent; however, they are interconnected and as such they represent a whole.

In principle, the EU ESP evolution was based on "Europe 2020 Strategy for smart, sustainable and inclusive growth" (EC Europe, 2020) and its support.

The issue of the Single Market Strategy (2012) was preceded by other EC documents which proposed a series of measures to strengthen the system of standard-setting (*inter alia* drafting European standards with help of other organizations, recognizing the importance of the Global Information and Communication Technology Standards, increasing the number of standards for services). Positives and Negatives of the Digital Single Markets and their implications were analyzed by Kolár-Melková (2016). The reasons of possible Brexit from EU and are analyzed in an analytical paper written by Meluš, (2016).

There are a great number of different institutions, organizations and stakeholders involved in European standardization: 1. ESOs – CEN (European Committee for Standardization), CENELEC (European Committee for Electrotechnical Standardization, and ETSI (European Telecommunications Standards Institute). (EC. Europa (2017). Key Players in European Standardization.); 2. National Standardization Bodies (NSBs); 3. small and medium-sized enterprises' (SMEs); 4. small and medium-sized enterprises' (SMEs); the comprehensive information on European Standardization was published in a Vademecum on European standardization .( EC Europe [online], 2018).

## 4. Discussion

Relations between the world-wide standardization development and the EU STP are highlighted. Criticism about the EU based on divergence of national interests is briefly analyzed.

### 4.1. Basics of EU STP and Analysis of its Modifications

Document „Europe 2020“ set out a vision of Europe's social market economy for the 21st century based on the priority of a smart, sustainable and inclusive growth and set out targets to be achieved by 2020. Seen by optics of 2017, many approaches were gradually modified. The most important corrections are related with ICT and the transition from Industry 3.0 to Industry 4.0 (I-SCOOP [online], 2017. Industry 4.0: the fourth industrial revolution (4IR) –

guide to Industry 4.0), and with the need to research social impact of the world standardization on the EU STP. These changes were partially reflected in the Single Market Strategy as well. However, seen by 2017 optics, it is still dubious which one of the three scenarios for 2020, i.e. sustainable recovery, sluggish recovery or a “lost decade” scenario will prevail.

#### ***4.2 Uncertainties About the Transition from Industry 3.0 to Industry 4.0***

As for ICT agendas, including the Internet, wireless networks, cell phones, and other communication mediums, it is worthwhile to remind many questions connected with the criticized “lagging of Europe” on this field, and the leading role of USA and China. At the same time, there are uncertainties about the on-going transition from Industry 3.0 to 4.0; comparisons based on historical analogies are evidently oversimplified. There are more reasons in favor of this view: (a) the national economy before 3.0 was more primitive; the actual state of Industry 3.0 in developed countries is incomparably more complex; (b) completely different character and dynamics of economic development; (c) different character of economic growth. (d) As for the actual state of the Industry 4.0, there is a lack of reliable facts; there are plenty of guesses based on different premises from which different hypotheses are derived. Many different Industry 4.0 concepts were elaborated by many authors. (e) The actual role of the modern state and its economic policy differs from new its role in the past. There is a justified tendency, to understand this process in a broader sense (Valenčík, R., 2018), and to apply multi-dimensional and interdisciplinary approaches. According to new approaches, the 4.0 Industry consists of much more elements than it was earlier defined (Civín, L., 2017).

#### ***4.3 Criticism of EU STP by ESOS***

In spite of the fact that the Regulation on EU STP (2012) was supported by ESOS (a mandatory energy assessment scheme for organizations in the UK that meet the qualification criteria) and its 38 member organizations, the inefficiency of this regulation was criticized shortly after its issuance: „ECOS regrets that the system does not currently guarantee such effective participation of societal stakeholders, neither at European nor national level”

ECOS advocates for a truly inclusive and transparent standards’ setting process which delivers standards reflecting societal and environmental interests most appropriately.” (ECOS [online], 2017. Standardization and Policy). But more than that: there were complaints that the EU Commission is attempting to abuse its STP to promote a supreme EU concept (United Europe against the “Europe of nations”). The question of different interests of the UK and EU was recently analyzed by Ševčíková (2016).

#### ***4.4 The World-wide STP of the ISO***

The leading role of the world-wide standardization organization - the ISO (ISO.org, 2017) - is undisputable. On the contrary, up-to-now the role of the EU STP was only regional and this situation probably cannot be changed; the EU STP is rather non-transparent and bureaucratic; therefore it is unattractive for its potential followers in the world.

#### ***4.5 EU STP Design***

The basics of the EU STP design are sound and reasonable. However, the “lost decade” syndrome which seems to be a prevailing expectation and feeling of many subjects, together with the growing opposition against the European Union future shape defined as a “super-state” is one of the barriers to a successful EC STP in the decade after 2020. In my opinion,

the EU future depends on absorption of the general globalization impact on one side, and the acceptance of the Europe of Nations on the other side.

## 5. Conclusion

Over the last 4 decades, a valuable theoretical knowledge was accumulated through academic research on the field of ST. However, the practical use of the majority of this knowledge is limited by political factors, as the fight about the final EU shape has not been decided. The litigation between the supra- and national- federalist concepts still continues. The economic growth in the upward phase of cycle seems to stimulate the first concept, the downward phase the second one. According to the facts presented in this paper, more facts support the “lost decade” paradigm, and the general GL trend of de-globalization is expected to win in the near future. If this is true, then a modification of EU STP will be necessary: a less tight regulation without rigidity and more flexibility, more space for competition and a more free play of market forces, more space for national STP needs. This expectation seems to be blocked by the present attempts of the unelected EC to continue its inefficient EU STP conserving the “lagging of Europe”. (Digital Europe. (2017, p. 8). Unfortunately, a more clear vision of a world-wide STP is still missing.

## References

- [1] Balassa, B. (1961). Towards a Theory of Economic Integration [online]. Available at: <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-6435.1961.tb02365.x>
- [2] Cívín, L. (2017). Limits of the global economy financialization process. In: *Proceedings of the 8<sup>th</sup> International Conference on “Financial Markets: Current State & Future Perspectives”*. Prague: Vysoká škola finanční a správní, 2017, pp.30-38. ISBN 978-80-7408-159-0
- [3] Digital Europe. (2017). The last call for Europe. Available at: Digital Europe\_Facing the data economy\_2017/0623 vf 2.pdf, p.8.
- [4] Douglas, S. and Wind, Y. (1987). The Myth of Globalization. In: *Columbia Journal of World Business*, 1987 [online]. [cit.2018-02-28]. Available at: [https://faculty.wharton.upenn.edu/wp-content/uploads/2012/04/8712\\_The\\_Myth\\_of\\_Globalization](https://faculty.wharton.upenn.edu/wp-content/uploads/2012/04/8712_The_Myth_of_Globalization).
- [5] EC. Europa (2012). Europe 2020. A strategy for smart, sustainable and inclusive growth [online]. [cit.2018-02-28]. Available at: <http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A52010DC2020>.
- [6] EC. Europa (2016). A Joint Initiative on Standardization [online]. Available at: <http://ec.europa.eu/growth/content/joint-initiative-standardisation-responding-changing-marketplace>.
- [7] EC. Europa (2017). European Standards [online]. [cit.2018-02-28]. Available at: [https://ec.europa.eu/growth/single-market/european-standards\\_en](https://ec.europa.eu/growth/single-market/european-standards_en).
- [8] EC. Europa (2017). European Standards Vademecum [online]. [cit.2018-02-28]. Available at: [https://ec.europa.eu/growth/single-market/european-standards/vademecum\\_en](https://ec.europa.eu/growth/single-market/european-standards/vademecum_en).
- [9] EC. Europa (2012). Notification System [online]. [cit.2018-02-28]. Available at: [http://ec.europa.eu/growth/single-market/european-standards/notification-system\\_en](http://ec.europa.eu/growth/single-market/european-standards/notification-system_en).



- [10] EC. Europa (2017). Key Players in European Standardization [online]. [cit.2018-02-28]. Available at: <https://ec.europa.eu/growth/single-market/european-standards/key-players>.
- [11] EC. Europa (2017). The annual Union work program for European standardization for 2018 [online]. [cit.2018-02-28]. Available at: <http://ec.europa.eu/transparency/regdoc/rep/1/2017/EN/COM-2017-453-F1-EN-MAIN-PART-1.PDF>
- [12] EC. Europa (2017). The European Single Market Standards [online]. [cit.2018-02-28]. Available at: [https://ec.europa.eu/growth/single-market/european-standards\\_en](https://ec.europa.eu/growth/single-market/european-standards_en).
- [13] EC Europe (2018). Vademecum on European Standardization. [online]. [cit.2018-02-28]. Available at: [https://www.google.cz/search?q=vademecum+on+european+standardization&ie=utf-8&oe=utf-8&client=firefox-b-ab&gfe\\_rd=cr&dcr=0&ei=mfCSWpi5Go2q8wenh64g](https://www.google.cz/search?q=vademecum+on+european+standardization&ie=utf-8&oe=utf-8&client=firefox-b-ab&gfe_rd=cr&dcr=0&ei=mfCSWpi5Go2q8wenh64g).
- [14] ECOS (2017). Standardization and Policy [online]. [cit.2018-02-28]. Available at: <http://ecostandard.org/category/standardisation-and-policy/>.
- [15] ESOS (2017). Guidance. Find out if you qualify for the Energy Savings Opportunity Scheme (ESOS) and how to comply. [online]. [cit.2018-03-25]. Available at: <https://www.gov.uk/guidance/energy-savings-opportunity-scheme.esos>.
- [16] ISO. Org. (2017). About us [online]. [cit.2018-02-28]. Available at: <https://www.iso.org/about-us.html>.
- [17] I-SCOOP (2017). Industry 4.0: the fourth industrial revolution (4IR) – guide to Industry 4.0 [online]. [cit.2018-02-28]. Available at: <https://www.i-scoop.eu/industry-4-0/>.
- [18] Kolár, M., Melková, M. Positives and Negatives of the Digital Single Markets. In: Kovářová, E., L.Melecký and M. Staničková (eds). Proceedings of the 3rd International Conference on European Integration 2016. Ostrava: VSB – Technical University.2016.pp.465-470.
- [19] Meluš, M. The Reasons of Possible „Brexit“ from the European Union. In: Kovářová, E., L.Melecký and M. Staničková (eds). Proceedings of the 3rd International Conference on European Integration 2016. Ostrava: VSB – Technical University.2016.pp.615-622.
- [20] Pavlát, V. Financial Market Infrastructures and their Regulation. In: Proceedings of the 8th International Conference on Currency, Banking and International Finance,"The Role of Financial Sector in Supporting the Economic Recovery of CEE Countries". 1. vyd. Bratislava: Ekonóm, University of Economics Bratislava, 2014. pp. 376-388, 13 s.
- [21] Pavlát, V. On Pitfalls of Standard-Setting. In Irena Jindřichovská, Dana Kubíčková. Proceedings of the 4th International Scientific Conference IFRS: Global Rules and Local Use. Praha: Anglo-American University / Anglo-americká vysoká škola, o.p.s., 2016. s. 97-104, 8 s.
- [22] REGULATION (EU) No 1025/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 October 2012 on European standardisation [online].

- [cit.2018-02-28]. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:316:0012:0033:EN:PDF>.
- [23] Scharpf, F. W. (1994) 'Community and autonomy: Multi-level policy-making in the European Union', *Journal of European Public Policy*, 1: 2, 219 - 242.
- [24] Ševčíková, M. Analysis of the Main Causes of Brexit and Its Potential Consequences. In: Kovářová, E., L.Melecký and M. Staničková (eds). proceedings of the 3rd International Conference on European Integration 2016. Ostrava: VSB – Technical University.2016.pp.961-968.
- [25] Valenčík, R. (2017) Průmysl 4.0 a odvětví produktivních služeb. (To be published In: *Conference VSFS on Human Capital*).

## **Disparities in Development Based on Taxonomic Research: a Case of Poland in the European Union**

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### **Abstract**

*Poland joined the European Union as a considerably poor economy characterized by relatively low socioeconomic development. Participation in the processes of regional economic integration and being a net beneficiary of the EU budget created a huge stimulus for acceleration of development of the Polish economy. The paper focuses on identification and assessment of disparities in socioeconomic development among European Union Member States. An attempt has been made in the paper to study and evaluate socioeconomic development of Poland's economy against the background of other European Union Member countries. Selected methods of multivariate comparative analysis, i.e. Z. Hellwig's taxonomic measure of development and standard deviation method of linearly ordered objects' grouping, were used. Research was conducted for the years 2004 and 2016.*

**Keywords:** *European Union, Poland, socioeconomic development, taxonomic research*

**JEL Classification:** *O11, C38, F63.*

### **1. Introduction**

Regional economic integration is considered to be one of the most characteristic processes for the world economy in the last decade of the 20<sup>th</sup> century and the beginning of the 21<sup>st</sup> century (Bjorvatn, 2004). The European Union is viewed as one of the most complex integration blocks (Pawlas, 2015). The last three enlargements of the EU, namely the ones that occurred in 2004 (Poland, seven other Central and East European countries, as well as Malta and Cyprus joined the EU), 2007 (Bulgaria and Romania became EU Member States) and 2013 (Croatia joined the EU as its 28<sup>th</sup> Member State), considerably changed the socioeconomic picture of the EU (Barcz, Wyrozumska and Górka, 2017). What's more, the 2008+ global financial crisis and later economic instability in the world economy created additional challenges for the EU and its Member States (Pawlas, 2018; Horúcková and Lebieczik, 2014). Regionally balanced economic development was stressed in the Rome Treaty already (Beck, 2012; Poledníková, 2014), its importance was further strengthened in Single European Act (Borowiec, 2011) and it still remains one of crucial macroeconomic objectives of the EU (Grosse (ed.), 2017). Economic development includes three areas that go beyond increase in income per capita, namely: development of the economic system of the country (economic development is facilitated by structural changes, including urbanisation, increase in the size of companies, relative decline in the importance of agricultural sector, rising significance of processing industry and service sector, geographical expansion of markets, increased diversity of produced and internationally traded products), distribution of benefits resulting from economic growth, which helps reduce poverty, as well as sustainable development (i.e. development that allows to meet the needs of current generations at a level that does not limit

the possibility to meet the needs of future generations) (Reinert and Rajan, 2009). Europe 2020 Strategy has resulted in the focus on three priorities: Smart growth, Sustainable growth and Inclusive growth (Pawlas, 2016). Poland joined the EU in 2004 as a poor economy characterized by a relatively low level of socioeconomic development. Participation in the processes of regional economic integration and being a net beneficiary of the EU budget created a huge stimulus for acceleration of development of the Polish economy (Belka, 2013). Therefore, it seems of vital importance to undertake research focusing on identification and assessment of disparities in socioeconomic development among European Union Member States. The paper aims to present the results of research, study and analysis regarding the evaluation of socioeconomic development of Poland's economy against the background of other European Union Member countries. Because of the complexity of the category of socioeconomic development, it was necessary to take into consideration a set of variables, not just one or two of them; therefore, the selected methods of multivariate comparative analysis were applied (Pawlas, 2014). Conducting the research for both 2004 and 2016 made it possible to determine changes that occurred after the 2004 enlargement of the EU. The scope of the undertaken and carried out research with the application of the two selected methods of taxonomic analysis in terms of the combination of 28 EU economies, 16 variables and the period from 2004 up to 2016 is new.

## 2. Problem Formulation and Methodology

The main problem of this article is the exploration, evaluation and diagnosis of disparities in development among European Union Member States. The economies of 28 EU Member States were studied in regard to their socioeconomic development in order to determine the relative position of Poland in the EU. Research was conducted for the years 2004 and 2016.

The research included the following tasks: A - Selecting the set of diagnostic variables, B - Exploring and diagnosing the situation in the analysed subjects i.e. EU Member States in selected aspects of socioeconomic development in order to make a hierarchy of the analysed in regard to synthetic measure of socioeconomic development, C – Grouping the analysed subjects – EU Member States – in four clusters according to the level of socioeconomic development.

The research tools used in the article included literature studies, descriptive analysis and multivariate comparative analysis, and in particular Z. Hellwig's taxonomic measure of development as well as standard deviations' method. Statistical material provided by EUROSTAT (Eurostat, 2018) and Central Statistical Office (Central Statistical Office, 2006; Central Statistical Office, 2007; Central Statistical Office, 2017a; Central Statistical Office, 2017b), Poland was used for the analysis.

Multidimensional methods of comparative analysis seem to be quite useful here due to the fact that as many as 28 economies are subject to comparisons and in addition to that one has to apply a great number of variables, indices. The research was based on Z. Hellwig's taxonomic measure of development (Malina, Zeliaś, 1996; Nowak, 1990; Pluta, 1986; Zeliaś 2004). The research included the following operations:

- a) Determining the set of diagnostic variables:  $\{x_1, x_2, \dots, x_m\}$ ;
- b) Determining the character of each of the variables (stimulus, de-stimulus);
- c) Standardizing the  $j$  variable in  $i$  unit:

$$z_j = \frac{x_{ij} - \bar{x}_j}{S_{x_j}} \quad (1)$$

where:

$x_{ij}$  - empirical value of  $j$  variable in  $i$  unit,

$\bar{x}_j$  - arithmetic mean of  $x_j$  diagnostic variable,

$S_{x_j}$  - standard deviation in  $x_j$  diagnostic variable distribution,

d) Constructing development model - a model unit, where values of diagnostic variables are determined according to the rule:

$$z_{0j} = \max_i (z_{ij}) \quad (2)$$

for stimulus, or

$$z_{0j} = \min_i (z_{ij}) \quad (3)$$

for de-stimulus;

e) Using Euclid's measure to calculate the distance of  $i$ -unit from the development model:

$$d_{oi} = \sqrt{\sum_{j=1}^m (z_{ij} - z_{0j})^2} \quad (4)$$

f) Calculating taxonomic measure of development (TMD) according to the formula:

$$\text{TMD}_{i=1} = 1 - \frac{d_{oi}}{d_o} \quad (5)$$

where:

$$d_o = \bar{d}_o + 2S_0 \quad (6)$$

$$\bar{d}_o = \frac{1}{n} \sum_{i=1}^n d_{oi} \quad (7)$$

$$S_0 = \sqrt{\frac{1}{n} \sum_{i=1}^n (d_{oi} - \bar{d}_o)^2} \quad (8)$$

g) Arranging the analysed subjects in order according to the level of development expressed by taxonomic measure of development (TMD).

The implementation of Z. Hellwig's taxonomic measure of development is widely used in comparative research. It made it possible to make a hierarchy of the analysed EU economies: from the most developed one to the least developed one.

Moreover, the application of cluster analysis for the research resulted in grouping of the analysed subjects – EU Member States – in four clusters according to the level of socioeconomic development in 2004 and 2016. A selected method of grouping of linearly ordered objects, namely the method of standard deviations was used for this purpose. EU Member States were divided into four groups, according to the following rules (Pawlas, 2017):

$$G_1 : s_i < \bar{s} - S(s), \quad (9)$$

$$G_2 : \bar{s} > s_i \geq s_i - S(s), \quad (10)$$

$$G_3 : \bar{s} + S(s) > s_i \geq \bar{s}, \quad (11)$$

$$G_4 : s_i \geq \bar{s} + S(s), \quad (12)$$

where:  $\bar{s}$  - arithmetic mean of synthetic variable (in this study: arithmetic mean of TMD), while  $S(s)$  - standard deviation of synthetic variable (in this study: standard deviation of TMD),  $s_i$  - value of the synthetic variable of the object  $i$  (in this study: TMD value in  $i$  economy).

The socioeconomic development of EU countries was analysed taking into consideration the following 16 variables:  $x_1$  – GDP dynamics (previous year=100);  $x_2$  – GDP per capita (PPP – purchasing parity power);  $x_3$  – inflation rate (%);  $x_4$  – activity rate (%);  $x_5$  – unemployment rate (%);  $x_6$  – public finance sector deficit/surplus (% GDP);  $x_7$  – general government gross debt (% GDP);  $x_8$  – exports per capita;  $x_9$  – employment in agriculture (% of total employment);  $x_{10}$  – share of service sector in GDP creation (%);  $x_{11}$  – natural growth (%);  $x_{12}$  – gross expenditure on research and development (R&D) (% GDP);  $x_{13}$  – mobile phone subscribers (per 1000 population);  $x_{14}$  – Internet users (per 1000 population);  $x_{15}$  – infant mortality rate (per 1000 born);  $x_{16}$  – population with tertiary education (% of population aged 30-34 years).

As mentioned before, for the needs of the research, the variables had to be divided into stimuli and de-stimuli. Most of the variables were treated as stimuli. The set of de-stimuli included: inflation rate, unemployment rate, general government gross debt, employment in agriculture as well as infant mortality rate.

It is necessary to stress, that because of the complexity of a category of socioeconomic development (Eberhardt and Presbitero, 2015; Faria, Montesinos-Yufa, Morales and Navarro, 2016; Zeira and Zoabi, 2015) a set of variables (not just one variable) ought to be used for analysis and surveys. The number of variables, however, depends on the scope of research. Sometimes lack of statistical data results in reducing the initial set of variables. One can also talk of a sort of freedom of selection of variables by researchers (Bařa, 2016; Pawlas, 2014). The set of diagnostic variables used for the analysis of disparities in socioeconomic development of EU countries described crucial areas of socioeconomic life of the analysed subjects. The variables were chosen on the basis of both theoretical background and literature review in consideration if similar empirical studies. An attempt was made to take into consideration the following elements/areas: demographic potential (natural growth, infant mortality rate), labour market (activity rate, unemployment rate), economic development (GDP per capita, GDP dynamics, employment in agriculture, share of service sector in GDP creation, inflation rate, exports per capita), situation of public finance sector (public finance sector deficit/surplus as % GDP and general government gross debt as % GDP), education and R&D activity (population with tertiary education, gross expenditure on research and development as % GDP) and Information and Communication Technologies sector development (mobile phone subscribers per 1000 population and Internet users per 1000 population). The usage of six more variables were considered on the initial stage of research, namely: railway lines per 100 km<sup>2</sup>, hard surface public roads per 100 km<sup>2</sup>, water supply network in km per 100 km<sup>2</sup>, sewage network in km per km<sup>2</sup>, population per bed in general hospitals, number of medicine doctors per 1000 population. Unfortunately, it was impossible to collect complete statistical data for all analysed EU Member States, that's why they were not used in the research. The diagnostic variables presented the economies of studied subjects (EU countries) fully and synthetically.

### 3. Problem Solution

Tables 1 and 2 present the achieved results of multidimensional comparative analysis conducted with the implementation of Z. Hellwig's method of taxonomic measure of development for the years 2004 and 2016 respectively.

The undertaken multidimensional comparative analysis showed that both in 2004 and in 2016 Luxembourg held the top position in the EU in terms of socioeconomic development expressed by synthetic measure of TMD. In 2004 five other EU economies were characterized by a comparatively high level of TMD, namely: Denmark, Netherlands, Ireland, Sweden and

Finland. Poland was positioned very low: it took the 26<sup>th</sup> position (Romania was the only EU27 economy placed below Poland). In 2016, the top five EU economies in regard to synthetic measure of development (TMD) included: Luxembourg, Netherland, Sweden, Denmark and Ireland. Poland was classified as the 18<sup>th</sup> economy out of 28 studied countries: 10 EU economies were classified lower than Poland. The following EU economies were characterized by a lower level of synthetic measure of socioeconomic development TMD: Slovakia, Latvia, Hungary, Spain, Portugal, Italy, Croatia, Bulgaria, Greece and Romania.

**Table 1: Ranking of 27 EU Economies According to Synthetic Measure of Development (TMD) in 2004**

Position	Economy	TMD	Position	Economy	TMD
1	Luxembourg	0.538	15	Cyprus	0.279
2	Denmark	0.459	16	Lithuania	0.250
3	Netherlands	0.451	17	Czech Republic	0.238
4	Ireland	0.450	18	Portugal	0.219
5	Sweden	0.450	19	Latvia	0.210
6	Finland	0.422	20	Italy	0.199
7	United Kingdom	0.403	21	Hungary	0.164
8	Belgium	0.379	22	Malta	0.163
9	Austria	0.351	23	Slovakia	0.160
10	France	0.333	24	Greece	0.157
11	Estonia	0.314	25	Bulgaria	0.133
12	Spain	0.306	26	<b>Poland</b>	<b>0.096</b>
13	Germany	0.306	27	Romania	0.001
14	Slovenia	0.297			

Source: Author's calculations based on statistical data from (Central Statistical Office, 2006; Central Statistical Office, 2007; Eurostat, 2018; PRO INNO EUROPE, 2007)

In 2004 Luxembourg's leading position resulted from a number of factors: Luxembourg was the number one EU economy in terms of GDP per capita, exports per capita and share of service sector in GDP creation, what's more Luxembourg was the EU economy with the second lowest general government gross debt in relation to GDP and employment in agriculture. In 2016 Luxembourg's top position resulted from the following factors: Luxembourg was the leading in EU economy in regard to GDP per capita, public finance sector surplus in relation to GDP, share of service sector in GDP creation, Internet users per 1000 population and employment in agriculture, moreover Luxembourg took the second highest position in terms of population with tertiary education as % of population aged 30-34 years and additionally Luxembourg was characterized by the second lowest level of general government gross debt in relation to GDP.

Poland's extremely low (26<sup>th</sup>) position in 2004 resulted (among others) from the following factors: the lowest activity rate, the highest unemployment rate as well as the second highest share of employment in agriculture and the second lowest number of mobile phone subscribers per 1000 population of all studied 27 economies. In 2016 the position of Poland was much higher. The improvement of Poland's position among 28 EU Member States in terms of synthetic measure of socioeconomic development in 2016 resulted from: a much lower unemployment rate, much higher intensity of mobile telecommunication subscription, as well as a relatively good situation in Poland in regard to GDP dynamics and the share of population with tertiary education in population aged 30-34 years.

Additionally, standard deviations' method of linearly ordered subjects' classification was applied in order to group EU economies into clusters (according to the level of their socioeconomic development). As a result, EU economies were grouped into four clusters, where cluster G4 included EU economies with the highest TMD (TMD of those countries amounted to at least arithmetic mean of TMD plus standard deviation of TMD), while cluster G1 included EU economies with the lowest TMD (for those countries TMD was lower than arithmetic mean of TMD minus standard deviation of TMD). The results of analysis with the application of standard deviations' method of classification of linearly ordered subjects for the years 2004 and 2016 are presented in tables 3 and 4.

**Table 2: Ranking of 28 EU Economies According to Synthetic Measure of Development (TMD) in 2016**

Position	Economy	TMD	Position	Economy	TMD
<b>1</b>	Luxembourg	0.661	<b>15</b>	Malta	0.292
<b>2</b>	Netherlands	0.508	<b>16</b>	Lithuania	0.278
<b>3</b>	Sweden	0.469	<b>17</b>	France	0.276
<b>4</b>	Denmark	0.450	<b>18</b>	<b>Poland</b>	<b>0.266</b>
<b>5</b>	Ireland	0.418	<b>19</b>	Slovakia	0.262
<b>6</b>	Austria	0.398	<b>20</b>	Latvia	0.261
<b>7</b>	Finland	0.383	<b>21</b>	Hungary	0.203
<b>8</b>	Germany	0.358	<b>22</b>	Spain	0.193
<b>9</b>	Estonia	0.347	<b>23</b>	Portugal	0.163
<b>10</b>	United Kingdom	0.345	<b>24</b>	Italy	0.153
<b>11</b>	Cyprus	0.331	<b>25</b>	Croatia	0.122
<b>12</b>	Slovenia	0.309	<b>26</b>	Bulgaria	0.098
<b>13</b>	Czech Republic	0.297	<b>27</b>	Greece	0.012
<b>14</b>	Belgium	0.292	<b>28</b>	Romania	0.003

Source: Author's calculations based on statistical data from (Central Statistical Office, 2017; Eurostat, 2018)

**Table 3: Division of EU Economies into Clusters in 2004**

Economy	Cluster	Economy	Cluster
Luxembourg	<b>G4</b>	Cyprus	<b>G2</b>
Denmark	<b>G4</b>	Lithuania	<b>G2</b>
Netherlands	<b>G4</b>	Czech Republic	<b>G2</b>
Ireland	<b>G4</b>	Portugal	<b>G2</b>
Sweden	<b>G4</b>	Latvia	<b>G2</b>
Finland	<b>G4</b>	Italy	<b>G2</b>
United Kingdom	<b>G3</b>	Hungary	<b>G2</b>
Belgium	<b>G3</b>	Malta	<b>G2</b>
Austria	<b>G3</b>	Slovakia	<b>G2</b>
France	<b>G3</b>	Greece	<b>G2</b>
Estonia	<b>G3</b>	Bulgaria	<b>G1</b>
Spain	<b>G3</b>	<b>Poland</b>	<b>G1</b>
Germany	<b>G3</b>	Romania	<b>G1</b>
Slovenia	<b>G3</b>		

Source: Author's calculations



In 2004 there were six economies in cluster G4, namely: Luxembourg, Denmark, the Netherlands, Ireland, Sweden and Finland. Cluster G3 embraced seven EU economies, in that: Belgium, Austria, France, the United Kingdom, Estonia, Spain and Germany. Cluster G2 consisted of ten EU economies: Cyprus, Lithuania, Czech Republic, Portugal, Latvia, Italy, Hungary, Malta, Slovakia and Greece. Cluster G1 was formed by three economies with the lowest level of synthetic measure of socioeconomic development TMD, namely: Bulgaria, Poland and Romania.

**Table 4: Division of EU Economies into Clusters in 2016**

<b>Economy</b>	<b>Cluster</b>	<b>Economy</b>	<b>Cluster</b>
Luxembourg	<b>G4</b>	Malta	<b>G3</b>
Netherlands	<b>G4</b>	Lithuania	<b>G2</b>
Sweden	<b>G4</b>	France	<b>G2</b>
Denmark	<b>G4</b>	<b>Poland</b>	<b>G2</b>
Ireland	<b>G3</b>	Slovakia	<b>G2</b>
Austria	<b>G3</b>	Latvia	<b>G2</b>
Finland	<b>G3</b>	Hungary	<b>G2</b>
Germany	<b>G3</b>	Spain	<b>G2</b>
Estonia	<b>G3</b>	Portugal	<b>G2</b>
United Kingdom	<b>G3</b>	Italy	<b>G2</b>
Cyprus	<b>G3</b>	Croatia	<b>G1</b>
Slovenia	<b>G3</b>	Bulgaria	<b>G1</b>
Czech Republic	<b>G3</b>	Greece	<b>G1</b>
Belgium	<b>G3</b>	Romania	<b>G1</b>

Source: Author's calculations

In 2016 cluster G4 was formed by four EU economies, namely: Luxembourg, the Netherlands, Sweden and Denmark. This time Ireland and Finland were elements of cluster G3 together with Austria, Germany, Estonia, United Kingdom, Cyprus, Slovenia, the Czech Republic, Belgium and Malta. Cluster G2 was formed by nine EU economies, namely: France, Poland, Slovakia, Latvia, Hungary, Spain, Portugal and Italy. A four-element cluster G1 was built by: Croatia, Bulgaria, Romania and Greece.

#### 4. Conclusion

Both the theory and practice suggest that regional economic integration processes create favourable conditions for socioeconomic development. The process of Poland's economy opening began in 1989. In the beginning of the 1990s Poland focused on association with the European Communities and in 1994 it officially applied for the European Union membership. The accession process was really long and complicated; it brought full access to the structures of the European Union in May 2004. Nine other economies joined the EU together with Poland. Bulgaria and Romania were granted EU membership in 2007. In mid 2013 Croatia joined the EU as the 28<sup>th</sup> Member State. The last three enlargements of the EU resulted in significant broadening of disparities in socioeconomic development within the European Union on the level of both national economies and regions. The main objective of the research was to study the disparities in development among the EU economies in order to determine the position of Poland in the EU in regard to socioeconomic development. Having in mind the assumption resulting from literature studies according to which socioeconomic development

is a broad, multidimensional category, a set of sixteen variables was used for the comparative analysis and the selected methods of multivariate analysis were adopted in research. The undertaken and carried out research let me prove hypothesis concerning internal diversity of the European Union in terms of economic development. Some changes were observed in the analysed period of time i.e. from 2004 to 2016. The application of Z. Hellwig's taxonomic measure of development made it possible to hierarchize EU economies according to socioeconomic development, while the standard deviation method of linearly ordered objects' grouping made it possible to group the analysed economies in four clusters. Conducting the research for the years 2004 and 2016 let me conclude that huge relative changes in levels of socioeconomic development of the economies of EU Member States occurred during the analysed period. Moreover, the research let me prove hypothesis according to which Poland considerably improved its relative position against the background of other EU economies and reduced the distance for the EU Member States characterized by the highest level of socioeconomic development: in 2004 only Romania was classified below Poland, while in 2016 Poland was classified as the 18<sup>th</sup> EU economy (it outpaced not only six new EU Member States, i.e. Slovakia, Latvia, Hungary, Bulgaria, Romania and Croatia, but also for old EU economies, i.e. Greece, Portugal, Spain and Italy). In 2004 Poland constituted cluster G1, which included also Bulgaria and Romania, i.e. the least developed economies, while in 2016 it was an element of cluster G2. It seems that the observed, considerable increase in level of socioeconomic development of Poland was partly caused by the use of structural funds and Cohesion Fund, while the relative decrease in socioeconomic development of South European EU Member States and some new EU Member States was the outcome of financial and economic crisis 2008+.

## References

- [1] Barcz, J., Wyrozumska, A. and Górka, M. (2017). *Instytucje i prawo Unii Europejskiej. Podręcznik dla kierunków prawa, zarządzania i administracji*. Warszawa: Wolters Kluwer.
- [2] Bąba, W. (2016). Changes in Level of Socio-Economic Development of EU Member Countries in the 2004-2013 Period – Taxonomic Analysis. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 37-45.
- [3] Beck, V. (2012). Financial Support versus Economic Development of Selected Regions in the EU. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 8-18.
- [4] Belka, M. (2013). How Poland's EU Membership Helped Transform Its Economy. *Group of Thirty Occasional Paper*, No. 88, Washington.
- [5] Bjorvatn, K. (2004). Economic integration and the profitability of cross-border mergers and acquisitions. *European Economic Review*, Vol. 48, Issue 6, pp. 1211-1226.
- [6] Borowiec, J. (2011). *Ekonomia integracji europejskiej*. Wrocław: Wydawnictwo uniwersytetu Ekonomicznego we Wrocławiu.
- [7] Central Statistical Office (2006). *Poland in the European Union 2006*. Warszawa: Central Statistical Office.
- [8] Central Statistical Office (2007). *Poland in the European Union 2007*. Warszawa: Central Statistical Office.

- [9] Central Statistical Office (2017a). *Poland in the European Union 2017*. Warszawa: Central Statistical Office.
- [10] Central Statistical Office (2017b). *Statistical Yearbook of the Republic of Poland in 2017*. Warszawa: Central Statistical Office.
- [11] Eberhardt, M. and Presbitero, A.F. (2015). Public debt and growth: Heterogeneity and non-linearity. *Journal of International Economics*. Vol. 97, Issue 1, September, pp. 45-58.
- [12] Eurostat (2018). *Statistics* [online]. [cit.2018-03-03]. Available at: <http://ec.europa.eu/eurostat/data/browse-statistics-by-theme>.
- [13] Faria, H.J., Montesinos-Yufa, H.M., Morales, D.R. and Navarro, C.E. (2016). Unbundling the roles of human capital and institutions in economic development. *European Journal of Political Economy*. Vol. 45, Supplement, December, pp. 108-128.
- [14] Grosse, T.G. (ed.) (2017). *European Union Policies at a time of Crisis*. Warszawa: Scholar Publishing House.
- [15] Horúcková, M. and Lebedzik, M. (2014). In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 262-271.
- [16] Malina, A. and Zeliaś, A. (1996). Taksonomiczna analiza przestrzennego zróżnicowania jakości życia ludności w Polsce w 1994r. In Nowak, E. and Urbaniak, M., (eds.). *Ekonometryczne modelowanie danych finansowo-księgowych*. Lublin: Uniwersytet Marii Skłodowskiej-Curie.
- [17] Nowak, E. (1990). *Metody taksonomiczne w klasyfikacji obiektów społeczno-gospodarczych*. Warszawa: PWE.
- [18] Pawlas, I. (2014). *Rozwój polskiej gospodarki na tle pozostałych krajów Unii Europejskiej w okresie niestabilności w gospodarce światowej*. Katowice: Wydawnictwo Uniwersytetu Ekonomicznego.
- [19] Pawlas, I. (2015). The Visegrad Countries and European Union Membership - Selected Issues. In *18th International Academic Conference, London, United Kingdom 25 - 28 August 2015*. Prague: International Institute of Social and Economic Sciences (IIES), pp. 581-592.
- [20] Pawlas, I. (2016). Europe 2020 Strategy and Its Implementation in Visegrad Group Countries. *14th International Scientific Conference Economic Policy in European Union Member Countries. Part 2. September 14-16, 2016 Petrovice u Karviné, Czech Republic*. Karviná : Silesian University in Opava, pp. 546-556.
- [21] Pawlas, I. (2017). Regional Disparities in Development Based on Taxonomic Research: A Case of Poland. *Regional Formation and Development Studies*, Vol. 23, No. 3, pp. 86-101.
- [22] Pawlas, I. (2018). The European Union at the crossroads with focus on its efforts to respond to global challenges. In *XVth International Scientific Conference Economic Policy in the European Union Member Countries*. Ostrava: VSB-Technical University Ostrava, pp. 175-193.

- [23] Poledníková, E. (2014). Evaluation of Czech Regional Development in the Context of the EU Cohesion. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 572-580.
- [24] Pluta, W. (1986). *Wielowymiarowa analiza porównawcza w modelowaniu ekonometrycznym*. Warszawa: PWN.
- [25] PRO INNO EUROPE (2007). *European Innovation Scoreboard 2006. Comparative Analysis of Innovation Performance*. PRO INNO EUROPE, INNOMETRICS.
- [26] Reinert, K. A. and Rajan, R. S. (eds.) (2009). *The Princeton Encyclopedia of the World Economy*. Princeton: Princeton University Press.
- [27] Zeira, J. and Zoabi, H. (2015). Economic growth and sector dynamics. *European Economic Review*, Vol. 79, No. October, pp. 1-15.
- [28] Zeliaś, A. et al. (2004). *Poziom życia w Polsce i krajach Unii Europejskiej*. Warszawa: Polskie Wydawnictwo Ekonomiczne.

## **Advanced Controlling and Information Systems Methods as a Tool for Cohesion and Competitiveness of the European Union**

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### **Abstract**

*European Union, its cohesion and competitiveness need new impulses which will encourages SMEs cooperation throw all EU. SMEs performance is very important for European economy, unfortunately SME are limited by financial capital and there is lack of solutions for closer cooperation between SMEs in all EU. It can be changed by advanced method of controlling as a management tool implemented in information systems, especially ERP systems. This advanced controlling systems supported by high performance IT systems are looking for gaps, stimulate creating solutions and allow usage all of capital types with higher efficiency. These advanced controlling systems should create new process system, more effective supply chains, new dimension of marketing and much more. Other great advantage is creating of management and communication systems which will allow connectivity across national border throw all Europe Union and which will stimulate economic cohesion and competitiveness of European SMEs and stimulate growth of strong and united European Union.*

**Keywords:** *controlling, management, ERP, Europe Union, SMEs*

**JEL Classification:** *M10, M15, L11, L15*

### **1. Introduction**

This review article analyses and synthesizes present position of European SMEs (Small and Medium Enterprises) in global view of European Union and its possible developing in near future. The basic research of the issue is based on the findings and outputs of project 7427/2017/4 entitled Specifics of Family Business under the auspices University of Finance and Administration, Prague. European SMEs are basic forces of European Union (EU) economy. SMEs and their development are therefore crucial to increasing the competitiveness of the European Union and their mutual cooperation within the single market then leads to the cohesion of the European Union. These goals and their achieving are in consequences with Strategy Europe 2020.

Motivation for basic research was understanding of SME and Family Business limitation for effective cross boarding cooperation and decreasing of cost inside companies. During basic case studies research, it was found that an effective tool for suppressing the effects of these limiting factors could be the implementation of an enterprise management system based on the principles of controlling and modern information systems.

These advanced managerial systems based on controlling are supporting increasing of efficiency, initiate effective supply chains, cutting cost – especially operational costs, support innovations leading to digitized interconnection and cooperation between individual SMEs and more others. The crucial questions of present will be also effective usage of human capital

and its development. Controlling system implemented to information system will support human resources capital and will open also cross boarder usage of these resources.

The European single market or the internal market or the common market within the European Union is an area without the internal borders of the Member States in which the free movement of goods, persons, services and capital is in force and which is defined by the Maastricht Treaty. The common European market is relatively homogeneous environment, but the benefits of this situation are more used by conglomerates than by SME. However, taking advantage of the controlling-based management system supported by the computational capacity of the current IT systems, the constraints for SMEs are shrinking and offer more efficient use of the potential of SMEs as one of the main strengths of the European economy, because cost of implementation and operating cost of these systems. European Commission and its “Strategy Europe 2020” is supporting development SMEs. It is necessary step for enhancing competitiveness and cohesion of European Union.

### ***1.1 SMEs are Basic Force of European Competitiveness and Cohesion***

European competitiveness and cohesion is important and actual topic. European supporting of Cohesion Policy Cohesion Policy has a strong impact at many areas. It is supporting European solidarity, creating jobs, support enterprises, research activities and others. Cohesion Policy is the EU’s main investment policy. It targets all regions and cities in the European Union in order to support job creation, business competitiveness, economic growth, sustainable development, and improve citizens’ quality of life. (European Commission [online], 2014) Cohesion Policy has 11 thematic objectives supporting growth for the period 2014-2020. Objective no. 3. is Enhancing the competitiveness of SMEs.

Present business environment in European Union and globally has been changed and becoming changes are still faster. SMEs in Europe Union have to adapt to this hyper-competitive environment. Market, business environment and entrepreneurship as such are now changing faster and less predictably due to a number of factors (globalisation, digitalisation, changes in shopping and communication habits of customers etc.). Achieving permanent success in this complex and dynamic environment has become very difficult, especially for small and medium-sized enterprises. (Petrů, N., & Havlíček, K., 2017)

SME business is sensitive to external influences and is very important part of EU economy. For its future development is necessary create condition for its supporting, include looking for performance management tools as an ERP system. Small and medium-sized enterprises face a number of problems which are difficult to overcome due to the nature of these enterprises which are very sensitive to changes in the business environment. (Piotr, D., 2016)

European SMEs are basic forces and create the backbone of the EU economy. SME are one of most important groups of employers and innovators in EU. SMEs employed 93 million people, accounting for 67 % of total employment in the EU-28 non-financial business sector and generating 57 % of value added in the EU-28 non-financial business sector. Almost all (93 %) of the SMEs were micro SMEs employing less than 10 persons. (European Commission [online], 2017).

Well-functioning economy is one of the basic preconditions for the cohesion and competitiveness of the European Union. Research on geographical proximity for SME exporting has not focused on the inter-regional liability of foreignness between the European Union (EU) and its motivations, while it has been shown that SME internationalization performance is affected by geographical scope. (D’Angelo et al., 2013; Rugman, 2003).

Furthermore, we cannot omit the special SME subgroup. They are family-owned SME businesses that are characterized by family ties with high resistance to negative influences of various character. They are an important subgroup of SMEs. European Union offered support to SMEs through Community programmes like the Multiannual Programme for Enterprise and Entrepreneurship and the Competitiveness and Innovation Framework Programme, combined with additional sources. Structural funds are used in promoting entrepreneurship and skills and improving SMEs growth potential. (Borbás, L. [online], 2015)

The aim of the article is to focus on the key factors that will enable the development of SMEs and the development of their mutual cooperation. Despite the important role played by services SMEs in national economies, their participation in international trade is perceived to be marginal and lags considerably behind the trade performance of their counterparts in manufacturing. (Lejárraga, I., & Oberhofer, H., 2015)

One of the major challenges for SMEs in the near future will be the transition to industry 4.0 and its connection with the necessary implementation of advanced information systems based on the principles of modern controlling. These new methods of controlling will improve of previously separated management disciplines and concentrate them in a single information system based on controlling. Firms look to adopt technological innovations in hopes of realizing a variety of positive outcomes, such as to increase productivity and attain higher service levels without expending more resources. (Pralhad, C.K. and Mashelkar, R.A., 2010)

Still faster growing and more important markets are e-commerce channels. It is very important part of European economy. SME and their full engagement and use of the potential is crucial to their future. Implementation and usage of e-business as way of interconnection between business partners through modern information and communication technology (ICT) is on path of growth. Their effects in use are actual topic of many scientific and pragmatic research projects. Challenges of e-business development, growth and future implementation in companies across the world are in focus of strategies in many countries and political and economic associations. (Pihir, I., 2013)

Controlling as a management tool offers many opportunities how support SME and their activities throw national borders. Its successfully implementation and developing in connection with Enterprises Resources Planning systems (ERP) will offer and in order to properly understand the nature of controlling, it is necessary to understand the link between strategic planning, operational planning, evaluation and risk management. Management activities depend on determination of the strategy (in the form of a strategic plan), followed by operational plans (marketing, sales, financial, human resources, innovation, etc.). (Havlíček, K., & Schlossberger, O. [online], 2013)

Therefore, the limited theories explaining information technology (IT) governance in large organizations cannot be linearly extrapolated to SMEs, since we are dealing with a completely different economic, cultural and managerial environment. (Devos, J., Hendrik, V. L., & Deschoolmeester, D., 2012) The main limitation of developing and implementing ERP controlling system are human factor, nature changes refusing statement and necessary capital resources. At present, however, the development of technologies and user interfaces is at advanced position. New technologies are user friendly and their more frequent usage makes their implementation for SMEs affordable. These ERP systems with the implemented controlling system are becoming to a significant competitive advantage.

SMEs are generally low-tech firms, but cutting-edge firms in biotechnology and in the computer, sector are often small or medium enterprises. SMEs produce 13 to 14 times more patents per employee than large patenting firms. (Bharati, P., & Chaudhury, A. [online], 2009)

It is obviously, that SME are main force in innovation process and their supporting will support strength of the competitiveness and cohesion of the European Union.

## 2. Problem Formulations and Methodology

Customized controlling implementations into advanced information systems, its operating in SME business management and measuring enterprise performance, is the task where is necessary check more criteria than financial statements, economic indicators or some levels of profit indicator.

There are main factors which are influencing implementation process and its performance:

- a) Basic analysis of strategy, process, enterprise need and selection of ERP or other information system.
- b) Implementation controlling management system and its customization for enterprise need.
- c) Sensitive managing of enterprises human resources and implementation process from new system from phase alignment throw synchronization phase to convergence phase.

Based on these basic points is necessary compare the enterprise economic data or other performance indicators with sociologic research inside company with general question. How the enterprises controlling ERP (Enterprise Resources Planning) system is used and assimilated by human capital?

It is very important, because this factor is influencing final results and we have to know reasons of success or fails in consequences at every implementation case. Other important data source is research inside companies before or without implementation ERP systems. Reached data will serve for comparison with data of enterprise which are using controlling ERP system.

In case of proofing influence to this managing controlling ERP system we will recognise increasing of enterprise activities and reaching better economic indicators as a causality of controlling ERP systems. Based on reached data define possible contribution to the competitiveness of the European Union and supporting of its cohesion.

### 2.1 Research Model

Research model was composed from 2 basic parts.

Part no. 1- define SME company under 50 million € turnover and under 250 employees, set up research survey focused on tasks of controlling and validate it. General tasks were to be focused at information systems, human capital and its assimilation process level.

After research data receiving the model proceed measure of economic indicators and their evaluation. Primary group of the surveyed companies were selected on the basis of business activities with emphasis at crossing the national borders of the Member States of the European Union.

Part no. 2 – recognise SME activities and its performance in comparing of usage or implementation ERP controlling systems as a management tool. Those companies were investigated in several consecutive periods and were evaluated again. For evaluating was used financial analysis of ROA (return of assets).

$$ROA = \frac{\text{Net Income}}{\text{Average Total Assets}} \quad (1)$$



Where:

Net income is a company's total earnings (or profit).

Average total assets are defined as the average amount of assets recorded on a company's balance sheet at the end of the current year and preceding year.

### 2.1.1 Model Calibration

This research is in progress and follows the research project of the vitality of family business and at present it is basic research. Selected enterprises are examined in the Administrative Register of Businesses (ARES) and then placed on the list in Microsoft Excel for their analysis. The total number of subjects advanced research is 44 (December 18. 2017). The purpose of this basic research is to calibrate the model for research on the significance and implementation information systems based on controlling and its impact on the future performance of the enterprise.

### 2.2 Data Analysis

Enterprises which were joined to research started first phase with fulfilling data to e-survey. First analysis was oriented if enterprise meets basic research requirements for this research if SME is doing business cross boarding in EU. If enterprise passed the basic analysis, then a closer internal personnel research was carried out, focusing on business management, process efficiency and its performance. This research process is comparing data from empirical analysis following periods from 2015 to 2017.

**Table 1: Development of IS Implementation in SME**

enterprise and its level of IS	2015		2016		2017	
	comp. no.	in %	comp. no.	in %	comp. no.	in %
without information system	8	24.20%	6	18.20%	3	9.10%
basic information system	12	36.40%	14	42.40%	18	54.50%
basic information system based on controlling	8	24.20%	12	36.40%	12	36.40%
advanced information system based on controlling	3	9.10%	5	15.20%	11	33.30%
not identified or lack of information	2	6.10%	0	0.00%	0	0.00%
<b>in total</b>	<b>33</b>		<b>37</b>		<b>44</b>	

Source: authors

### 3. Problem Solution

This basic research shows, that solution looking process and topic problematic is complicated and it is necessary to define main research areas to get relevant results.

### 3.1 Degree of Maturity of Controlling Processes

Based on reached data was researched maturity of controlling processes or others management tools in companies. There were recognised many different principles from very simple systems based on paper reporting and calculator to advanced and largely automated information systems - usually ERP. The majority common factor that influenced the maturity of management processes and deployment of the information system was the attitude of the owners or top management at this issue. Enterprises with higher maturity IS (information system) and controlling were managed and developed with an emphasis on implementing new technologies and finding solutions that will reduce operating costs and which will support effective communication in company.

**Table 2: Managers and Owners Attitude to IS Controlling System**

attitude to IS controlling system	2015		2016		2017	
	comp. no.	in %	comp. no.	in %	comp. no.	in %
no need for information systems	13	39.4 %	9	27.3 %	3	9.1 %
yes, it is usefully, but not necessary	12	36.4 %	9	27.3 %	4	12.1 %
we need it, but we do not have plan for implementation	4	12.1 %	13	39.4 %	18	54.6 %
yes, we started with implementation IS	3	9.1 %	4	12.1 %	11	33.3 %
yes, we use IS and we are working on its development	1	3.0 %	2	6.1 %	8	24.3 %
<b>in total</b>	<b>33</b>		<b>37</b>		<b>44</b>	

Source: authors

Another important factor that significantly affected the level of implementation of the IS based on controlling was the size of the business and its performance. Smaller businesses (turnover under 5 million € or less than 50 employees) were mostly oriented on operatives and were behind the implementation tasks.

### 3.2 Information Systems

The information system (IS) and its choice is a key issue for the enterprise. About 26% of total enterprises during this research (2016-2017) has decided about changing their information system, because their previous system had basic limitations, which did not support necessary enterprise needs for its development and growth. There are two main ways, how to choose information system. First is premanufactured system called also as a box solution, which is relative cheap but its usage opportunities are limited, or choose systems based on advanced database systems which should be customized up to enterprise requests. At second case the enterprise will have "unlimited" opportunities for functionality and customization, but purchase, implementation and its operation are orders of magnitude higher. At this moment the enterprise has to decide which one solution is optimal. Usually, the enterprise use "box ERP solution" and after some period this ERP system is replaced by so customized solution.

### **3.3 Human Resources and Technology**

The crucial task for successful implementation of information system based on controlling is acceptance process by enterprise human resources. Based on research survey (2015-2017) 91.6 % of all respondents understood that a properly set information system can have a positive impact on performance of the company and its future development. But only 26.4 % of respondents would appreciate if these technologies were installed at their working position.

People and their acceptance of technology is crucial question for successive information system implementation and its operating and future development. During this basic research had 4 enterprises serious problems with own business operation and be seriously damaged, because they underestimate work with human resources regarding the implementation of new information technologies and business management system based on controlling.

### **3.4 Enterprise Performance Analysis**

Return of assets (ROA) ratio, often called the return on total assets, is a profitability ratio that measures the net income produced by total assets during a period by comparing net income to the average total assets. It is significant ratio for enterprise management system performance. ROA indicates that the performance of researched enterprises which used ERP controlling system was on average 0.32% higher after the ERP implementation than before implementation process.

Other very interesting research area was employees' fluctuation. About the fluctuation question is not significant result yet. This research suggests, that in consequences of information systems are connected human resources structural changes. It is significant that companies need flexible employees. If employee will accept this challenge, then support from the company will across current shortcomings and from the other hand is still difficult find work for inflexible employees. These two main streams are against each other and making conclusions at this point would be premature. It is important to notice, that these results are only the conclusions of basic research. It is necessary continue with this research on a larger research sample of companies for a longer period to get to significant results.

### **3.5 Main Barriers for Implementation**

Based on research (surveys and personnel interviews) these basic barriers to successful implementation have been identified as:

- a) Lack of financial resources for purchasing and customization of ERP based on controlling.
- b) Deeper managerial degree of awareness of the needs for implementation.
- c) Human resources degree and skills level throw all company structures include top management and owners and their necessary support of implementation process.

In managerial overview the biggest task is change meaning of decision making responsible people which are perceive of the controlling-based information system implementation as an operational task. This task is important and for its successful implementation is necessary start thinking about business strategy and strategic investment more than about operational goal.

### **3.6 Opportunities for Future Development**

Based on research there were recognised areas which are being to open new opportunity which should be important for future SMEs and their developing and competitiveness. For the European Union, this development could boost its global competitiveness and its cohesion.

- a) Increasing efficiency based on quality management, cutting operational cost, higher capital usage with bigger efficiency. In consequences of this research was discovered that all researched enterprises will recognise their cross-border cooperation as an increasing.
- b) Creating of new communication standards which allow automated inter-company cooperation within the territory of the European Union. This new communication standards will support shorter supply chains, higher efficiency for manufacturing, inventory planning, and goods or services customization.
- c) Usage of these ERP controlling system will create enterprise management tool, which should create environment for continual improving of any process and all company.
- d) These ERP controlling systems will offer many opportunities how to use it. For example, these systems should be used as a toll which is supporting hand overring process in family business, it should be the main management base for creating franchisee business, it should serve like main base for implementation industry 4.0 and others.

## **4. Conclusion**

Innovations are the main forces which push the boundaries of the known and are the driving force of the SMEs business, which is backbone of Europe Union economy. Supporting and developing SMEs operation, their development and cooperation is one of main task for European economy. Process of implementation information systems based on controlling should be one of ways how to effective support SME and boost their cross-boarding cooperation in Europe Union. At present there are not serious limitations for implementation of this technology a management controlling system. The biggest challenge for supporting this solution is set up effective structures for accessibility information, to stimulate the education of future implementers and create or restart the financial resources and programs that will support this trend. Cohesion and competitiveness of the European Union is crucial task and if we will support idea of Europe Union, then we have ideal tool how to do it.

### **4.1 Future Research Debate**

Future research SME and its supporting is challenging task for any country and especially for cohesion and competitiveness of Europe Union. There are many tasks for research. The main areas we can recognise are effective communication inside and outside of SME, its accessibility to financial resources, its supporting of new technology and investment to education of new technological skilled generation. In the case of the European Union, a special attention was conferred to the following types of SME: SME from the rush and medium technical sectors that have affinities by the nature of their businesses deployed with Internet and the new evolutions of the market; the SME that exploit the opportunities offered by the electronic commerce, especially in the services sector - sometimes named cyber-firms; the SME integrated in the chains of added value of the big companies which are forced to innovate under the pressure of the main clients. (Oncioiu, I. [online], 2013) Most of the empirical research viewed the SME's involvement in international operations as an evolutionary and sequential process, based on the fundamental assumption that export activity develops from a

series of incremental decisions. (Stouraitis, V., Mior Harun, M. H., & Kyritsis, M. [online], 2017) Currently, in the SME sector (in accordance with the above-mentioned assumption of the authors) one can notice combining basic goals of operation with their pro-ecological activeness in support of natural environment, as well as local community. (Jedrzejczyk, W., & Kuceba, R. [online], 2015) Information and communication technologies (ICT) play an important role by contributing to rapid technological progress and productivity growth. The ICT sector represents 4.8% of the European economy. It generates 25% of total business expenditure in Research and Development (R&D), and investments in ICT account for 50% of all European productivity growth. (Folea, V. [online], 2015).

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### **References**

- [1] Bharati, P., & Chaudhury, A. (2009). *SMEs and competitiveness: The role of information systems*. International Journal of E-Business Research, 5(1), 9-11,12,13,14,15,16,17,18,19. [online]. [cit.2018-01-22]. Available at: <https://search.proquest.com/docview/222251274?accountid=37662>
- [2] Borbás, L. (2015). The role of SMEs in the european entrepreneurship policy. Management, Enterprise and Benchmarking in the 21st Century, , 71-88. [online]. [cit.2018-01-25]. Available at: <https://search.proquest.com/docview/1945201974?accountid=37662>
- [3] D'Angelo, A., Majocchi, A., Zucchella, A. and Buck, T., (2013), *Geographical pathways for SME internationalization: insights from an Italian sample*, International Marketing Review, Vol. 30 No. no. 2, pp. 80-105
- [4] Devos, J., Hendrik, V. L., & Deschoolmeester, D. (2012). *Rethinking IT governance for SMEs*. *Industrial Management & Data Systems*, 112(2), 206-223. <http://dx.doi.org/10.1108/02635571211204263>
- [5] European Commission, 2014. *An introduction to EU Cohesion Policy 2014-2020* [online]. [cit.2018-03-28]. Available at: <https://ec.europa.eu/docsroom/documents/26563/attachments/1/translations/en/renditions/native>
- [6] European Commission, 2017. *Annual Report on European SMEs 2016/2017* [online]. [cit.2018-01-25]. Available at: [http://ec.europa.eu/regional\\_policy/sources/docgener/informat/basic/basic\\_2014\\_en.pdf](http://ec.europa.eu/regional_policy/sources/docgener/informat/basic/basic_2014_en.pdf)
- [7] Havlíček, K., & Schlossberger, O. (2013). *New trends of management of european SMEs: The M-C model*. *European Research Studies*, 16(4), 43-55. [online]. [cit.2018-02-20]. Available at: <https://search.proquest.com/docview/1637638590?accountid=37662>
- [8] Jedrzejczyk, W., & Kuceba, R. (2015). *Barriers, determinants, financial support mechanisms in green SME areas*. *Theory, Methodology, Practice*, 11(2), 23-30.

- [online] [cit.2018-03-27]. Available at:  
<https://search.proquest.com/docview/1765556892?accountid=37662>
- [9] Lejárraga, I., & Oberhofer, H. (2015). *Performance of small- and medium-sized enterprises in services trade: Evidence from french firms*. Small Business Economics, 45(3), 673-702. <http://dx.doi.org/10.1007/s11187-015-9647-z>
- [10] Oncioiu, I. (2013). *Current challenges and future trends for romanian small and medium enterprises: An empirical study*. Advances in Management and Applied Economics, 3(3), 67-83. [online] [cit.2018-03-27]. Available at:  
<https://search.proquest.com/docview/1399687120?accountid=37662>
- [11] Folea, V. (2015). *EU opportunities ICT research and innovation in horizon 2020 for 2016-2017*. Journal of Information Systems & Operations Management, , 309-324. [online] [cit.2018-03-27]. Available at:  
<https://search.proquest.com/docview/1770932940?accountid=37662>
- [12] Petrů, N., & Havlíček, K. (2017). *Family entrepreneurship in the Czech Republic on the verge of first generation handover*. Journal of International Studies, 10(4), 119-130. doi:10.14254/2071-8330.2017/10-4/9
- [13] Pihir, I. (2013). *Challenges of measuring the direct effects of E-business in SMEs*. Vedecké Práce Materiálovotechnologickej Fakulty Slovenskej Technickej Univerzity v Bratislave so Sídлом v Trnave, 21, 137. <http://dx.doi.org/10.2478/rput-2013-0023>
- [14] Piotr, D. (2016). *Restructuring of Small and Medium-Sized Enterprises the European Perspective*. In International Conference on European Integration. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 190-196.
- [15] Prahalad, C.K. and Mashelkar, R.A. (2010), *Innovation's holy grail*, Harvard Business Review, Vol. 88 Nos 7/8, pp. 132-41.
- [16] Stouraitis, V., Mior Harun, M. H., & Kyritsis, M. (2017). *Motivators of SME initial export choice and the european union regional effect in manufacturing*. International Journal of Entrepreneurial Behaviour & Research, 23(1), 35-55. [online] [cit.2018-03-27]. Available at:  
<https://search.proquest.com/docview/1855272382?accountid=37662>

## The Future of European Education in Context of Socio-economic Trends

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### **Abstract**

*The economies of highly developed countries are based on the growing resources of a well-educated workforce with creative and innovative skills, which is a necessary condition for economic and social progress. It seems that knowledge is one of the most valuable resources that affects economic development. At the same time, the multidimensional character of socio-economic changes implies the need for constantly implementing new solutions that will be a real response to current challenges. Therefore, education should be at the centre of attention of EU member states' policies. The article presents the significance of education, especially higher education, in economic development based on the debate taking place in literature on the subject. The aim of the article is to attempt to identify the most important socio-economic trends that may shape the directions of education development, especially among EU member states. Based on theoretical findings, having examined the European Union's documents and the international reports, an attempt was made to identify the potential areas of challenges that European education might need to face in the near future.*

**Keywords:** *challenges for education, European education, higher education, socio-economic trends*

**JEL Classification:** *I20, I23, I25*

### **1. Introduction**

The European Union sets goals and frameworks for education policy, but each EU country is responsible for its own education and training system. The EU contributes to the development of quality education by encouraging cooperation between member states and, if necessary, by supporting and supplementing their action (TFEU, article 165). The EU action shall be, among others, aimed at: developing the European dimension in education, encouraging mobility of students and teachers, promoting cooperation between educational establishments, developing exchanges of information and experience on issues common to the education systems of the member states and encouraging the development of distance education (TFEU, article 165).

The EU's reflection paper on *harnessing globalisation* identifies education and skills as a priority for European cooperation (European Commission, 2017b). It seems that the development of higher education is of particular importance to education policy. The European Commission (EC) underlines that higher education plays a significant role, because demand for highly skilled people is increasing. Jobs are becoming more complex. People's capacities to be entrepreneurial, manage complex information or think creatively are a crucial element for economic development (European Commission, 2017a).

It seems that, if education is to fulfil its role in the economic growth of each country, educational progress should be oriented at adaptation to the socio-economic changes. Despite the fact that education is among supporting competences (TFEU, article 6), it seems that the member states face similar challenges in this field.

## **2. Problem Formulation and Methodology**

The main purpose of the article is to attempt to identify the challenges that European education, especially higher education, is facing. Why is education significant for economic growth? Which socio-economic changes (trends) can influence the future of education? What are the implications for higher education? This article endeavours to answer the above questions.

To accomplish the objectives of the article, the analysis is divided into three parts. At the beginning, an attempt was made to explain the role of education in the economic development. The next part describes selected socio-economic trends, which may shape education. In the last part, an attempt was made to identify the potential challenges that European higher education might need to face in the near future.

The research method here adopted involves a literature survey and its critical analysis, a study of treaty regulations and strategic European documents and the analysis of international reports.

## **3. Problem Solution**

It seems that the multidimensional character of socio-economic changes implies the need for constant development in education, especially higher education. Reflections on the above issue were presented in this section.

### ***3.1 The Role of Education in Socio-Economic Development***

The World Bank's report *The Changing Wealth of Nations 2018* attempts to estimate sources of global wealth in the context of three types of capital. According to this source, 9% of world wealth is attributable to natural capital, 27% produced capital, and the rest, 64% to human capital. In high-income OECD countries, human capital accounts for 70% of total wealth, produced capital for almost 28%, and natural capital for almost 3% in 2014. (Lange et.al., 2018). N. Bontis (2004) noticed that human capital is defined as the knowledge, education and competencies of individuals that enable them to perform their work and achieve their social goals. "The human capital of a nation begins with the intellectual wealth of its citizens" (Bontis, 2004, p. 20).

The economies of highly developed countries are based on the growing resources of a well-educated workforce with creative and innovative skills, which is a necessary condition for economic and social progress. Links between the level of economic development and investments in human capital run in two directions - human capital, as a factor of economic growth, it affects the pace of economic development, however the quality of educational infrastructure and investments in skills and knowledge are also directly proportional to the level of income (Skubiak, 2013, p.195-196).

Regarding literature review, the role of education in economic growth has often been emphasized. Studies of the following researchers should be mentioned: R. Barro (e.g. positive association between quantitative measures of schooling and economic growth), E. A. Hanushek and D. Kimko (analysis of the results in mathematics and science and their



correlation with indicators of economic growth), S. Teodorescu (the impact of formal education on the macroeconomic development in Romania and in other EU member states) or N. U. R. Khattak and J. Khan (study on the contribution of education on economic growth in Pakistan) (Teodorescu, 2017).

F. Margan (2012) noted that "investing in education, particularly in secondary and lifelong learning" is among the Golden Rules of Competitiveness by Garelli. The significance of education, especially higher education, is demonstrated by the fact that some indicators, corresponding to this area, are taken into account in the measurement of competitiveness and innovations of national economies. For example, indicators such as total public expenditure on education or achievements in higher education are available in the methodology used by the IMD World Competitiveness Centre (IMD, 2018) indicators, which are harnessed in *Higher education and training* pillar, which is one of elements of the *Global Competitiveness Index*, prepared by World Economic Forum (Schwab 2017), or indicators such as new doctorate graduates, population aged 25-34 with tertiary education, lifelong learning, which are used in *European Innovation Scoreboard* (Hollanders, 2017).

It is worth mentioning, that nowadays universities are becoming a place of creation of not only scientific and theoretical knowledge but useful knowledge as well (Pleśniarska, 2016). Higher education is significant for both economic and social progress and aligning skills with labour market needs is essential in this. However, the role of universities is much wider than patents generation, publications or education and training. Universities should be seen as creators and translators of innovations (Vidican, 2009). In an increasingly globalized and knowledge-based economy, the European Union is in need of a well-skilled workforce, which will be able to compete in terms of productivity, quality, and innovation. Taking into account the above considerations, it is worth attempting to identify the challenges that higher education is facing. It seems that the quality and development of this sector may have a significant impact on the development of national economies and the future welfare of European citizens.

### **3.2 A Discussion of Economic and Social Trends**

Contemporary times are characterized by the extraordinary dynamics of changes in the socio-economic area. Further considerations therefore focus on identifying selected areas and directions of changes in social, demographic, economic, technological and political aspects. It seems that those changes may affect the development of education, especially higher education.

In economic aspect the following tendencies can be observed:

- a) *New directions of development in economy and demand for new skills* – There are noticeable changes in the economic area, due to the development of new directions e.g. circular economy, digital economy, green economy and sustainable economy. The structure of economy is changing (mainly due to the growing importance of services). In that case, there is a growing demand for people with higher education, highly skilled, having digital skills. With reference to forecast, half of all jobs are projected to require high-level qualifications in Europe, up to 2025 (European Commission, 2017a).
- b) *Focus on innovations* – Innovations and knowledge resources have importance in building a competitive advantage in both the micro and macroeconomic dimensions (Pleśniarska, 2016). Nowadays, the importance of social innovations is also growing in the EU.
- c) *Globalisation* – Consequences of globalisation are observed in the increase of international trade and other markers of worldwide financial integration. For example, multinational companies (e.g. Starbucks, H&M) had a presence in only a few countries

in the 1990s. Nowadays, they have operated in multiple nations (in 2014 Starbucks - 66 countries, H&M - 55 countries). Inditex, has a presence in over 80 national markets worldwide. It is worth mentioning that world values for foreign direct investment increased by 170% between 1970 and 2013 (OECD, 2016b).

- d) *Urbanisation* – Currently, over 50% of the world's population lives in cities, up to 2050 it could be seven out of ten people. For example, over 90% of population lived in cities in Belgium, over 80% in Luxembourg, Netherlands, Denmark, Sweden and Finland in 2013. Moreover, metropolitan areas produce a disproportionately higher percentage of the country's GDP when compared to the percentage of the population living in metropolitan areas in most countries. For example, 80% of the national GDP growth was contributed by cities in Greece, over 70% in France and Hungary, over 60% in Estonia and Denmark between 2000 and 2010 (OECD, 2013).

In social and demographic aspects, the following tendencies can be observed:

- a) *Changing in global population* – With reference to forecast, 61% of the world's 8-billion population will be in Asia, while the EU-27 will be accounting for 5.5% in 2025. This may bring about a multipolar world (different political and economic powers) (European Commission, 2017b).
- b) *Migration* – Mobility seems certain to increase in the near future. According to the International Organisation for Migration (IOM) the number of international migrants worldwide reached 244 million in 2015 (in 2013 was 232 million). Germany became the second most popular destination for international migrants globally. The year 2015 saw the highest levels of forced displacement globally recorded since World War II. Almost 1 in 3 first-time asylum applicants in the EU were minors, a 9% increase compared to 2014 levels (IOM, 2018).
- c) *Society and lifestyle* – Changes in lifestyle are caused mainly by development of information society, knowledge society and changes in social relations (e.g. diversity of families - traditional vs. non-traditional families) and consequences of ageing society.

In technological aspect, the following tendencies can be observed:

- a) *Digital revolution* – In reference to the fifth wave of development, defined by J. Schumpeter, the Internet and new technologies have determined the changes in almost all areas of human life since the 1990s (Pleśniarska, 2016). It seems that the digital revolution is progressing so fast that fundamental changes are noticed during life of one generation. European Commission (2017b) suggests that digitalisation, robots, artificial intelligence, and 3D printing will revolutionise production, working, transport and consumption. A lot of all sectors will be changed in the near future, for example: transport (e.g. driverless and connected cars), energy (e.g. smart grids), agri-food (e.g. applications to reduce food waste), health care (e.g. online diagnosis) (European Commission, 2017b). Moreover, one in ten jobs across the OECD is at high risk of automation (OECD, 2016a).
- b) *The Internet* has become an integral part of people's lives, especially with the development of mobile handheld devices. For example, online shopping is very popular in the EU. In 2017 online purchases by internet users increased by 18 percentage points compared to 2007 (Eurostat, 2017).
- c) *Multi-tasking* – Technologies also shape individual behaviours and abilities. Generally, the average number of activities performed online at the same time (e.g. sending emails, checking social networks, reading) has increased. However, differences are noticeable between the EU, for example Polish Internet users perform on nearly five activities simultaneously, while Swedish or Finnish almost eight in 2013 (OECD, 2016b).
- d) *The impact of social networks* – For example, the number of Twitter accounts dramatically picked up. Only 4 international organisations and 5 world leaders had

Twitter accounts in 2007 while it was accordingly 89 international organisations and 660 world leaders in 2015. Facebook has recorded over 1 billion users in a single day (OECD, 2016b).

A political aspect is also worth mentioning. In the context of the European Union two points should be pointed out: multidimensional consequences resulting from Brexit and threats and opportunities associated with the future of European integration (relevance of the European project, multi-speed Europe, differences between member states etc.).

### ***3.3 Challenges for European Education***

The European Union is involved in the development of education in many ways, by setting development goals and their monitoring (e.g. Strategy Europe 2020, Education and Training 2020 strategy) or by supporting higher education through policy cooperation and funding programmes (e.g. a renewed EU agenda for higher education, Erasmus+, Horizon 2020). In 2017, the EC pointed out new direction to EU support for higher education and delimited four priorities for action: 1) tackling future skills mismatches and promoting excellence in skills development; 2) building inclusive and connected higher education systems; 3) ensuring higher education institutions contribute to innovation; 4) supporting effective and efficient higher education systems (European Commission, 2017a).

It is a well-known fact that some of the challenges that higher education is facing are related to the following areas: massive education, internationalization, quality of education, the structure of university financing (increasing the expenditure, engaging the private sector), and cooperation between science and business. However, with reference to the above mentioned tendencies (in economic, social, technological, political aspect) it is worth attempting to identify some challenges and implications for higher education (table 1).

**Table 1: Selected Challenges and Implications for European Education**

<b>Type of tendencies</b>	<b>Selected challenges and implications for higher education*</b>
<b>Economic</b>	<ul style="list-style-type: none"> <li>- the need to develop teaching specialist skills, which are necessary in the labour market,</li> <li>- the need to prepare students to work in multinational companies, develop intercultural business skills,</li> <li>- the need to teach people universal skills to understand and solve problems (teach how to learn, what is important in continuing lifelong learning in future),</li> <li>- the need to follow the newest directions in economy steadily and fast not only through preparing well-educated workforce but creating useful knowledge (also social innovations),</li> <li>- the need to foster creativity in science and teaching,</li> <li>- the need to plan university infrastructure around sustainability,</li> <li>- the need to ensure well-educated graduates, due to the higher productivity of cities.</li> </ul>
<b>Social and demographic</b>	<ul style="list-style-type: none"> <li>- the need to prepare for the inflow of students from various backgrounds (socio-economic classes or cultures),</li> <li>-the need to develop global competencies such as tolerance, understanding and acceptance of diverse cultural values, and also cooperation in a multinational classroom</li> <li>- reskilling aging workforce through lifelong learning,</li> <li>- the need to create more mobile and flexible education</li> </ul>
<b>Technological</b>	<ul style="list-style-type: none"> <li>- using new technologies to extend the reach and quality of education,</li> <li>- the need to monitor the quality of online educational materials,</li> <li>- the need for personalisation in education with the use of new devices and technology,</li> <li>- providing training on the use of big data,</li> <li>-the need to teach and develop digital literacy and multitasking necessary in the modern world,</li> <li>- the need to follow the digital revolution (especially in context of the development of new directions in teaching),</li> <li>- the need for teaching students how to evaluate the validity of online information,</li> <li>- the need to include the possibilities of social networks in learning system</li> </ul>
<b>Political</b>	<ul style="list-style-type: none"> <li>- the need to revise programmes (e.g. Erasmus+, Horizon 2020) due to the UK's status changing after Brexit,</li> <li>- losing the UK's higher education, which is one of the most important elements in European science and research development sector,</li> <li>- changing the EU's position in international university rankings after Brexit (nowadays, British universities rank leading position),</li> <li>- eliminating the differences between member states in the development and quality of higher education.</li> </ul>

\* Selected implications are based on OECD (2016b) report.

Source: Own elaboration

## 4. Conclusion

The role of education in the socio-economic development seems to be determined in the face of the increasing significance of human capital and the need for innovations. Education should then be first of all characterized by flexibility and constant readiness for implementing changes in many areas almost simultaneously. In addition, development of learning skills and universal skills, together with skills necessary on the labour market, should be a pivot of education.

Challenges and implications discussed in this paper, which higher education in EU member states might need to face in the future, are characterized by: multidimensional nature (they influence different areas of education and operation of universities), the necessity of opening for new stakeholders (multinational group of students, of varied ages, students with different experience), as well as becoming partially dependent on external incentives (e. g. technology development, new devices that can be used for example in education).

In the face of contemporary globalization processes and tendencies of global nature (such as migrations, demographic changes and digital revolution etc.) it could be doubted whether particular member states are ready for and capable of facing many challenges in education. In the light of the above, a decision to qualify education policy as supporting competences, might not be enough. On the other hand, a condition and a quality of education have a significant influence on generating economic growth of particular economies, which in a way constitutes their power, international significance and identity. In the future, education policy might therefore become one of the elements determining the shape of European integration.

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## References

- [1] Bontis, N. (2004). National Intellectual Capital Index: A United Nation Initiative for the Arab Region. *Journal of Intellectual Capital*, Vol. 5 No. 1, pp.13-39.
- [2] *Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union*. Official Journal of the European Union, 2016/C 202/01.
- [3] European Commission (2017a). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a renewed EU Agenda for Higher Education*, COM(2017) 247 final.
- [4] European Commission (2017b). *Reflection paper of harnessing globalisation*, [online]. [cit.2018-02-14]. Available at: [https://ec.europa.eu/commission/sites/beta-political/files/reflection-paper-globalisation\\_en.pdf](https://ec.europa.eu/commission/sites/beta-political/files/reflection-paper-globalisation_en.pdf).
- [5] Eurostat (2017). *E-commerce statistics*. [online]. [cit.2018-02-17]. Available at: <http://ec.europa.eu/eurostat/statistics-explained/index>.
- [6] Hollanders, H. (2017) et. al. *European Innovation Scoreboard 2017 Methodology Report*. European Commission.

- [7] IMD World Competitiveness Center (2018), *Methodology and Principles of Analysis* [online]. [cit.2018-02-15]. Available at: <https://www.imd.org/wcc/world-competitiveness-center-mission/methodology/>.
- [8] International Organisation for Migration (2018). *Global Migration Trends Factsheet 2015*. [online]. [cit.2018-02-17]. Available at: [gmdac.iom.int/global-migration-trends-factsheet](http://gmdac.iom.int/global-migration-trends-factsheet).
- [9] Lange, G.M., Wodon, Q., Carey, K. (2018). *The Changing Wealth Of Nations 2018 - Building a Sustainable Future*, International Bank for Reconstruction and Development / The World Bank [online]. [cit.2018-02-14]. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/29001/9781464810466.pdf?sequence=2&isAllowed=y>.
- [10] Margan, F. (2012). Competitiveness in the EU on the Context of the Globalized Economy. In Honová, I., L. Melecký and M. Staničková (ed.). *Proceedings of the 1st International Conference on European Integration 2012*. Ostrava: VŠB-Technical University of Ostrava, pp. 188-198.
- [11] OECD (2013). *Regions at a Glance 2013*, OECD Publishing, Paris. [online]. [cit.2018-02-17]. Available at: [http://dx.doi.org/10.1787/reg\\_glance-2013-en](http://dx.doi.org/10.1787/reg_glance-2013-en).
- [12] OECD (2016a). *OECD Science, Technology and Innovation Outlook 2016*, OECD Publishing, Paris. [online]. [cit.2018-02-10]. Available at: [http://dx.doi.org/10.1787/sti\\_in\\_outlook-2016-en](http://dx.doi.org/10.1787/sti_in_outlook-2016-en)
- [13] OECD (2016b). *Trends Shaping Education 2016*, OECD Publishing, Paris. [online]. [cit.2018-02-10]. Available at: [http://dx.doi.org/10.1787/trends\\_edu-2016-en](http://dx.doi.org/10.1787/trends_edu-2016-en).
- [14] Pleśniarska, A. (2016). *Wykorzystanie e-learningu w polskich uniwersytetach w aspekcie rozwoju gospodarki opartej na wiedzy*, Toruń: Adam Marszałek.
- [15] Schwab, K. (2017) *The Global Competitiveness Report 2017-2018* [online]. [cit.2018-02-15]. Available at: <https://www.weforum.org/reports/the-global-competitiveness-report-2017-2018>.
- [16] Skubiak, B. (2013). Edukacja jako czynnik wspierający rozwój gospodarczy. Implikacje dla Polski. *Studia Ekonomiczne / Uniwersytet Ekonomiczny w Katowicach*, No.129, pp.195 – 203.
- [17] Teodorescu, S. (2017). Formal Education in the European Union and Its Impact on the Macroeconomic Development. *Romanian Statistical Review nr. 1 / 2017*, pp.73-90.
- [18] Vidican, G. (2009), The role of universities in innovation and sustainable development. *WIT Transactions on Ecology and the Environment*, Vol. 120, pp.131-139

# **The Promotion of Employment as a Goal of the Economic Policy of the European Union: a Question of State Aid and Its Impact on the Public Debt in EU Member States**

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## **Abstract**

*The promotion of employment is a central goal of the economic and social policy both of the European Union and also of its Member States. The relevant State aid rules therefore have to outweigh on the one hand the coherence between competition rules and on the other hand to secure measures for fighting unemployment. This paper discusses guidelines for implementation of art. 107-109 of the Treaty from the point of view of State aid for employment. This has to lead to verification of two research theses. According to the first thesis, the Central and Eastern Europe countries approved and granted State aid for employment by far smaller amounts than the EU-15 Member States. Whereas the second thesis highlights that the amount of State aid provided by EU Member States should be negatively correlated with the size of their general government sector debt. The analysis was based on a linear regression model. The response variable is the size of general government sector debt, while the explanatory variable is the expenditure on State aid for employment.*

**Keywords:** *competition policy, employment, European Union, general government sector debt, State aid*

**JEL Classification:** *E62, K20, K33*

## **1. Introduction**

Social and economic advancement is one of the main objectives of the internal market, and employment and training are seen as fundamental to attaining these aims. The first objective set out in Article 2 of the Treaty on European Union (TEU, OJ 2016 C 202/13) specifically states that it is an objective of the European Union "to promote economic and social progress and a high level of development". Consistent with this aim, the 2005 re-launch of the Lisbon Strategy marked "growth and jobs" as the cornerstone for the policy and reform and the method for stimulating greater economic development in the EU (Communication, 2005). The EU has also recognized the support of a high-employment economy as one of the priorities of the 'Europe 2020' Strategy and set the ambitious goal of reaching by 2020 a level of 75% of employment for people belonging to the age group of 20-64 years (European Commission, 2010a). As part of the flagship initiative "An agenda for new skills and employment" (European Commission, 2010b), the main priorities were identified to address this challenge; they included a better-functioning labour markets, a better qualified workforce that should be able to contribute to technological evolution and adapt to it through new work organization systems, better jobs and better working conditions, and more effective policies to stimulate job creation and demand for labour.

The purpose of this article is to analyze the conditions of admissibility of State aid for employment from the perspective of its impact on the *general government* sector debt of EU Member States. The analysis of State aid should lead to the verification of two research theses. According to the first thesis, the Central and Eastern Europe countries approved and granted State aid for employment by far smaller amounts than the EU-15 Member States. Whereas the second thesis highlights that the amount of State aid provided by EU Member States should be negatively correlated with the size of *general government* sector debt of these countries. The connection between State aid expenditures and public debt in economic literature was never confirmed. The article offers an analysis of connection between State aid expenditures for employment purposes and *general government* sector debt using a linear regression model.

### ***1.1 State Aid for Employment***

From the economic point of view relating to State interventionism it ought to be noted that State aid can be a justified action mainly because of the social prosperity if free competition market mechanism does not bring satisfactory results (Biondi, 2013; Crafts, 2017). In this case, a well-planned State intervention may improve the allocation of production factors, reduce the irregularity in the market functioning and enable the achievement of common interest (Ferčič and Samec, 2014; Stöllinger, R. and Holzner, 2017). The major criterion for providing State aid should be rationality, which is the highest determinant of the admissibility of using the aid measures (Maurici and Sargent, 2015; Bumane, 2017). It results from the fact that in a market economy the competition is essential for the proper functioning of the market and protecting the interests of its participants (Pisapia, 2015; Popović and Caka, 2017). State aid should not violate it unless its violation will be compensated by positive market phenomena that were caused by providing the aid. With the use of the aid instrument the State realizes the objectives that are considered a priority for socioeconomic development (Tunali and Fidrmuc, 2015).

Legal regulation of the issue of State aid is an element of protection of the mechanism of competition, which has been recognized in the Treaty on the Functioning of the European Union (TFEU, OJ 2016 C 202/47) as one of the basic tools for the realization of the tasks assigned in it. The general prohibition of providing State aid has been formulated in Article 107 par. 1 TFEU, whereas this provision does not specify the definition of State aid, but indicates the criteria taken into account when assessing the specific actual circumstances (Podsiadło, 2016). Many forms of State intervention to support employment will not constitute State aid, particularly where assistance is granted to individuals, rather than undertakings, or where support is provided through general measures. In some circumstances, however, the promotion of employment and the funding of training programmes may trigger State aid, for example where the State provides or supports training and employment for specific sectors or enterprises.

#### ***1.1.1 Legal Basis - Guidelines and Block Exemptions***

In 1995 the Commission published guidelines on aid to employment (Guidelines, 1995), which set out the Commission's policy in this area. A number of subsequent guidelines were issued by the Commission providing further inside into the policy behind its State aid decisions regarding employment (Botta, 2016). These included a notice on the monitoring of State aid and reduction of labour costs (Notice, 1997) and a second set of guidelines on employment aid (European Commission, 2000). In 2002, pursuant to the Enabling Regulation (Council of the European Union, 1998), the Commission adopted a block exemption for certain types of aid for employment (European Commission, 2002), in particular schemes to encourage the creation of employment in deprived areas of the EU, and schemes promoting the employment



of disabled or disadvantaged workers (Ferri, 2015). The block exemption replaced the Commission's guidelines on employment aid and allowed Member States to award certain types of employment aid without the need for approval or prior notification to the Commission (Hölscher, Nulsch and Stephan, 2017). A further exclusion of State aid for employment from the notification rules was included in the General Block Exemption Regulation (GBER) (European Commission, 2008). The GBER Regulation provides a framework that allows Member States to provide aid targeted at creating jobs, increasing competitiveness and improving the environment without having to contact the European Commission. The GBER Regulation allowed Member States to grant aid to facilitate workers with disabilities or disadvantaged workers for another reason to find employment on the open labour market without first having to report this aid to the Commission. These provisions set a block exemption for three types of employment aid, i.e. aid in the form of wage subsidies for the recruitment of employees, aid in the form of wage subsidies for the employment of disabled workers, and aid to compensate for additional costs related to employment of disabled workers. As from 1 July 2014, a new regulation came into force – with a perspective until the end of 2020 - it excluded certain horizontal aid categories from the notification procedure to the Commission (European Commission, 2014). The regulation underlined that supporting the recruitment and employment of disadvantaged and disabled workers are extremely important goals of the economic and social policy of the Union and its Member States (Nicolaidis and Schoenmaekers, 2015). Therefore, public authorities may take measures to encourage enterprises to increase the employment levels of these categories of workers, especially young people. Thus, three categories of employment aid introduced by the GBER regulation were maintained.

## 2. Problem Formulation and Methodology

State expenditure policy, which includes the policy of State aid to enterprises, can boost GDP growth and increase GDP *per capita* (which means the national economy is becoming more competitive) even if the State spends more money than it has accumulated in the budget. This portends the appearance of budget deficits, the accumulation of which in the coming years leads to the formation of *general government* sector debt. Deficits and the public debt that attends them are financed through domestic monetary savings or foreign ones. The State accomplishes this process by taking a loan in the form of debt securities, which are bought by banks, investment funds, insurance companies and the like - that is, institutions that accumulate the monetary savings of entities participating in the economy, mainly households. Fiscal policy therefore plays an important role in economic growth, especially when enterprises and commercial banks won't support real economic processes (investment processes) and economic growth: the refusal happens for various reasons, including an increased risk of capital loss is among them. The savings accumulated in commercial banks and other financial institutions are thus borrowed by the State, which creates the demand for consumer goods and investment goods, consequently stimulating the processes of economic growth.

The level of *general government* sector debt is useful information not only in studying the sustainability of public finance resulting from the weight of burdens with service costs in the short term. It also shows the implementation of the redistribution-intergenerational function: where the growing public debt in the current period may result in the instability of public finance for future generations. In the article as a test period the years 2000-2016 were adopted, i.e. the period of implementation of the two most important development strategies of the European Union - the Lisbon Strategy and the "Europe 2020" Strategy (taking the year 2016 as the closing period of observation was due to the available annual data on State aid, which is published by Eurostat). The thesis was accepted that the amount of State aid provided by

EU Member States should be negatively correlated with the size of *general government* sector debt of these countries. The response variable (dependent variable Y) is the size of *general government* sector debt, while the explanatory variable (independent variable X) is the expenditure on State aid for employment. The negative correlation of the size of *general government* sector debt with the amount of State aid for employment would mean that with the increase of such State aid there should be the decrease in the debt of the public finance sector of EU Member States providing such aid.

Statistical analysis will be carried out based on two source tables.

The first shows the calculations for the linear regression model concerning the slope parameter (directional factor  $\beta$ ). t Stat is a test of the occurrence of a linear relationship between expenditures on State aid for employment and the size of the *general government* sector debt. This statistical test makes it possible to verify the authenticity of the null hypothesis that the parameter of regression function I type  $\beta$  is equal to zero, and the alternative hypothesis that it is not equal to zero ( $H_0: \beta = 0; H_A: \beta \neq 0$ ). The acceptance of the null hypothesis that parameter  $\beta = 0$  would mean that the increase in the value of expenditure on State aid by €1 does not cause any changes in the size of the *general government* sector debt. This in turn means the lack of a relationship between expenditure on State aid and the size of the *general government* sector debt. In other words, the acceptance of the null hypothesis means the lack of the influence of the State aid for employment provided by the Member States of the European Union on the size of their *general government* sector debt. Given the perspective taken in this paper, it will be essential to reject the null hypothesis in favor of the alternative - that is, there is a significant statistical relationship between expenditure on State aid and the size of the *general government* sector debt. From the tables of critical values of t-Student it is seen that  $\pm t_{\frac{\alpha}{2}} = \pm 2.1315$  for  $\alpha = 0.05$  and  $n - 2 = 15$  degrees of freedom. The null hypothesis can be rejected in favour of the alternative hypothesis only when  $t_b < t_{\frac{\alpha}{2}}$  or  $t_b > t_{\frac{\alpha}{2}}$ , that is when  $-t_b < -2.1315$  or  $+t_b > +2.1315$ . The  $p$ -value is the probability of making a type I error. This would involve, based on the results of the test, the rejection of the hypothesis that the value of parameter  $\beta$  is zero, when in fact it is zero in the entire population. In other words, a type I error is a rejection of a real null hypothesis. The higher the value of the t-test means, the lower the probability of a type I error occurring. In general, it is assumed that if the  $p$ -value is less than 0.05, the null hypothesis can be rejected in favour of the alternative hypothesis, and thus it can be claimed that there is a statistically significant relationship between the expenditure of EU Member States on State aid for employment and the size of the *general government* sector debt of these countries.

The second table contains regression statistics, including the correlation coefficient, determination coefficient, standard error and the parameters of the F test - that is, the value of F-test and the probability of making a type I error, when it is verified that expenditure on State aid does not impact the size of the *general government* sector debt (the irrelevance of State aid expenditure in the regression model). Similar to the t-test described above, the F-test is used to test the significance of linear regression coefficient  $\beta$  evaluation. Statistic F with F-Snedecor distribution of  $k_1$  and  $k_2$  degrees of freedom is used to check this test. When rejecting the null hypothesis  $F > F_{\alpha}$  of no relation between expenditure on State aid and the size of the *general government* sector debt and accepting the alternative hypothesis of the existence of a statistically significant relationship between the variables. From the table of critical values of the F-Snedecor for  $k_1 = 1$  (1 independent variable) and  $k_2 = n - 2 = 15$  degrees of freedom and  $\alpha = 0.05$  we read  $F_{0,05} = 4.543$ . Thus, the alternative hypothesis can be adopted only when  $F > 4.543$ .

## 2.1 Model and Data

Member States granted aid earmarked for employment of about €43.7 billion in 2000-2016: EU-15 - €31.6 billion, EU-12 - only €12.1 billion (Eurostat, 2018). The largest amounts of employment aid have been granted by Denmark (€15.7 billion), Italy (€4.2 billion), France (€3.9 billion), Belgium (€1.7 billion) and United Kingdom (€1.4 billion). In the Central and Eastern Europe area the countries that provided the greatest employment aid are Poland, Hungary and Slovenia - respectively €8.9 billion, €2.1 billion and €0.7 billion.

Does State aid for employment provided by Member States to enterprises have an adverse effect on the condition of their public finance, leading to a decrease or increase in the size of the *general government* sector debt of these countries? Or does such aid not have any impact on the *general government* sector debt? Answers to these questions will be provided by the regression analysis.

### 2.1.1 Model Calibration

The most important statistical test in the simple regression analysis is a test of whether the regression coefficient equals zero. If it can be concluded that the directional coefficient of the real regression line in the population equals zero, it will mean that there is no linear relation between expenditure on state aid and the size of *general government* sector debt, or expenditure on State aid and the size of *general government* sector debt are not linearly dependent. Therefore, there should be a test to determine the occurrence of the linear relation between expenditure on State aid for employment in the Member States and the size of their *general government* sector debt. Table 1 shows the statistics on this test.

The calculations in table 1 indicate that 11 Member States have a linear relationship between expenditure on State aid for employment and the size of *general government* sector debt.

Only in the case of Austria, Germany and Ireland, the regression coefficient takes a negative value. Consequently, the increase in expenditure on State aid by €1 is accompanied by a decrease in *general government* sector debt by an average of (by country): €3979.33, €7742.69 and €2882.27. Margin of error is: €636.34, €2067.04 and €487.45. Bearing in mind, however, the confidence interval for the regression coefficient, it is nearly certain (95% probability) that an increase in State aid of €1 will cause general government sector debt to fall in the following countries: Austria from €2623.01 to €5335.65, Germany from €3336.90 to €12148.50 and Ireland from €1843.30 to €3921.24.

For Belgium, Estonia, Finland, Latvia, Lithuania, Malta, Poland and Slovenia the regression coefficients take positive values. This means that expenditures on employment aid have a positive impact on the state of public finance for these countries. An increase in expenditure on State aid by €1 is accompanied by an increase in the size of *general government* sector debt, by an average of, respectively, €799.42, €397.19, €1096.97, €3477.56, €821.45, €241.38, €190.86 and €214.26. Estimation errors are respectively €264.47, €166.19, €319.23, €1015.18, €58.04, €92.11, €35.19 and €37.60. Taking into account the confidence interval for the regression coefficient, it is a near certainty (95% probability) that an increase in expenditure for State aid of €1 million will raise *general government* sector debt by the value of the interval (€235.72; €1363.12) for Belgium, (€42.96; €751.42) for Estonia, (€416.54; €1777.39) for Finland, (€1313.76; €5641.36) for Latvia, (€697.74; €945.16) for Lithuania, (€45.06; €437.70) for Malta, (€115.85; €265.86) for Poland and (€134.12; €294.41) for Slovenia.

For these countries, the probability of making a type I error is very small, and does not exceed the accepted level of significance of 0.05. Such an error would be connected with the rejection

of a real null hypothesis concerning the lack of a correlation between the size of the State aid for employment and the size of *general government* sector debt.

**Table 1: State Aid for Employment and General Government Sector Debt – Analysis of Variance: the Line "Variable X"**

EU Member State	Regression coefficient $b$	Standard error $S_b$	$t$ Stat $tb$	$p$ -value	Lower 95%	Upper 95%
Austria	-3979.33	636.3357	-6.25351	1.55E-05	-5335.65	-2623.01
Belgium	799.4235	264.4679	3.022762	0.008566	235.7235	1363.123
Bulgaria	-14.4074	120.8218	-0.11925	0.906664	-271.933	243.1183
Cyprus	-1179.07	3469.876	-0.3398	0.738717	-8574.94	6216.794
Czech Republic	-945.309	482.234	-1.96027	0.06881	-1973.17	82.54822
Denmark	20.68908	9.945069	2.080335	0.055052	-0.50833	41.88649
Estonia	397.1898	166.1918	2.389948	0.030416	42.96028	751.4194
Finland	1096.966	319.2307	3.43628	0.003674	416.5419	1777.39
France	-340.332	247.4536	-1.37534	0.18922	-867.767	187.1027
Germany	-7742.69	2067.042	-3.74578	0.001948	-12148.5	-3336.9
Greece	-977.934	1191.724	-0.8206	0.424721	-3518.03	1562.166
Hungary	59.12885	30.41114	1.944316	0.070856	-5.69095	123.9487
Ireland	-2882.27	487.448	-5.91298	2.85E-05	-3921.24	-1843.3
Italy	-1069.27	619.589	-1.72578	0.104921	-2389.9	251.348
Latvia	3477.562	1015.178	3.42557	0.003755	1313.762	5641.362
Lithuania	821.4517	58.04041	14.1531	4.4E-10	697.7415	945.162
Malta	241.3782	92.10549	2.620671	0.019288	45.06002	437.6964
The Netherlands	-1237.24	1130.707	-1.09422	0.291118	-3647.29	1172.801
Poland	190.8593	35.18981	5.423711	7.05E-05	115.854	265.8646
Portugal	-681.65	497.8081	-1.3693	0.191058	-1742.7	379.4024
Romania	-3921.13	2759.291	-1.42106	0.175753	-9802.42	1960.16
Slovakia	324.6128	3093.778	0.104924	0.917826	-6269.62	6918.844
Slovenia	214.2639	37.59952	5.698581	4.22E-05	134.1224	294.4054
Spain	-2275.69	2519.231	-0.90333	0.380631	-7645.3	3093.928
Sweden	-162.626	134.7918	-1.2065	0.24631	-449.928	124.6758
The UK	-1133.08	776.3547	-1.45948	0.165057	-2787.84	521.6848
EU 28	1373.029	1093	1.256202	0.228256	-956.645	3702.702

Source: The author's own calculations

Analysis of the value of the test F (greater than 4.543) and F significance (lower than 0.05) bears out the hypothesis. Table 2 lists the test F parameters and regression statistics for the relationship between the size of State aid and the size of *general government* sector debt in EU countries.

For both Austria and Ireland, there is a strong and negative correlation between employment aid granted to undertakings and the amount of the countries' *general government* sector debt: 0.850158 and 0.836528, respectively. These models have a good fit to the empirical data, as their coefficient of determination comes out to 0.722768 and 0.69978, also respectively. 72.28% and 69.98% of the variations in *general government* sector debt in these countries were attributed to variations in expenditures on State aid for employment, while the remaining 27.72% and 30.02% resulted from the impact of other factors.

**Table 2: State Aid for Employment and General Government Sector Debt - Regression Statistics and F-test**

EU Member State	Regression statistics			Test F	
	Correlation indicator	Determination coefficient	Standard error	F	Significance F
Austria	0.850158	0.722768	30064.35	39.10634	1.55E-05
Belgium	0.615264	0.37855	50076.29	9.13709	0.008566
Bulgaria	0.030774	0.000947	2778.161	0.014219	0.906664
Cyprus	0.087401	0.007639	4869.476	0.115466	0.738717
Czech Republic	0.451591	0.203934	18473.62	3.842661	0.06881
Denmark	0.473197	0.223916	14375.26	4.327795	0.055052
Estonia	0.525145	0.275777	583.5816	5.71185	0.030416
Finland	0.663676	0.440466	21556.84	11.80802	0.003674
France	0.334637	0.111982	432162.6	1.891553	0.18922
Germany	0.695204	0.483309	271666.3	14.0309	0.001948
Greece	0.207278	0.042964	68748.98	0.673392	0.424721
Hungary	0.448657	0.201293	16916.27	3.780363	0.070856
Ireland	0.836528	0.69978	42630.46	34.96333	2.85E-05
Italy	0.407016	0.165662	293918	2.978319	0.104921
Latvia	0.662516	0.438928	2899.091	11.73453	0.003755
Lithuania	0.964538	0.930333	1381.168	200.3102	4.4E-10
Malta	0.560414	0.314064	848.8768	6.867919	0.019288
The Netherlands	0.271884	0.073921	85538.84	1.197321	0.291118
Poland	0.813811	0.662289	33268.47	29.41664	7.05E-05
Portugal	0.333333	0.111111	60572.59	1.874992	0.191058
Romania	0.344462	0.118654	20293.56	2.019423	0.175753
Slovakia	0.027081	0.000733	12613.05	0.011009	0.917826
Slovenia	0.827065	0.684036	5613.662	32.47383	4.22E-05
Spain	0.227141	0.051593	288528.4	0.815997	0.380631
Sweden	0.297419	0.088458	22788.3	1.455638	0.24631
The UK	0.35263	0.124348	562330	2.130089	0.165057
EU 28	0.308527	0.095189	2428502	1.578044	0.228256

Source: The author's own calculations

For Germany, the value of the correlation coefficient is 0.695204. This country exhibits a medium negative relationship occurring between the amount of State aid and the level of its *general government* sector debt. Moreover, the regression line cannot be satisfactorily adjusted to the empirical data. The determination coefficient for Germany is lower than 0.50.

Lithuania shows a very strong and positive correlation between State aid for employment and the size of *general government* sector debt. The correlation indicator is 0.964538. With Lithuania's determination coefficient at 0.930333, this model has a very good fit to the empirical data. 93.03% of the variations in the size of the government's *general government* sector debt were attributed to variations in expenditure on State aid, while the remaining 6.97% were the result of other factors (other non-aid variables, imprecise fit of a straight line to the empirical data). If the coefficient of determination takes values of less than 0.5, the regression explains only less than 50% of the variation in *general government* sector debt and predictions based on such a regression model may be unsuccessful because the model then explains very little. This means that predictions can be created based on the Lithuanian model, because the

regression model is characterised by a very good fit and is not burdened much by the estimation error, which provides grounds for precise forecasting.

At 0.813811 and 0.827065, respectively, Poland and Slovenia all show a strong positive correlation between the amount of State aid provided and the level of *general government* sector debt. However, the determination coefficients have a very low value - 0.662289 and 0.684036.

In the case of Belgium, Estonia, Finland, Latvia and Malta, the values of the correlation coefficient are included in the interval (0.525145; 0.663676). These countries demonstrated a weak and medium positive relationship between the amount of State aid they provided and *general government* sector debt. Moreover, the regression line cannot be adjusted to the empirical data to a satisfactory degree. The determination coefficients for these countries are: 0.37855, 0.275777, 0.440466, 0.438928 and 0.314064.

### 3. Discussion

From the point of view of the regression analysis carried out in the area of the condition of public finances, the case of Lithuania, Latvia and Estonia is very interesting. The Baltic countries since the accession in 2004 to the European Union were characterized by a high rate of economic growth. Until 2007, high GDP growth in nominal and real terms, an increase in the number of employed and employment rates, a decline in unemployment, stabilization of prices, increase in final demand and private and public consumption caused that the development process of the Baltic countries economies was called the "Baltic miracle", and the countries - "Baltic tigers". As a result of the global financial crisis, the intense economic development of the Baltic countries has been halted. The consequences of the slowdown and the recession were particularly felt on the labour market, which was confirmed by the increase in the unemployment rate. In the public finance sector, it was necessary to take consolidation measures to reduce the budget deficit and public debt. The consolidation structure in the Baltic countries was very similar, as more than two-thirds of the reduction in the budget deficit constituted cuts in expenditures, mainly current ones. Thus, increasing public aid expenditures must ultimately lead to an increase in public debt – as demonstrated by the regression analysis carried out. Cuts in expenses were of a different scale and depended on the extent to which the economy was affected by the crisis. The smallest were in the case of Estonia, whose recession did not prevent the euro adoption in 2011. In the case of Lithuania, it was necessary to undertake a more radical expenditure consolidation, which resulted from the existing legal regulations, according to which any change in the Lithuanian tax law should be announced at least six months before the introduction, which prevented quick implementation of changes in tax rates. Latvia had the most difficult economic and fiscal situation, which required the application of extremely radical adjustment measures and the acquisition of 7.5 billion euro of foreign aid from the International Monetary Fund, the World Bank and the Scandinavian countries.

### 4. Conclusion

In relation to the proposed research theses in the paper it also should be concluded that:

1. The first thesis, according to which the Central and Eastern Europe countries approved and granted State aid for employment by far smaller amounts than the EU-15 Member States, were positively verified.

2. The second thesis, according to which, both in relation to the European Union and its individual Member States, the amount of expenditure on State aid for employment is negatively correlated with the size of *general government* sector debt of these countries, should be rejected. It was incorrect to assume that this correlation occurs for all Member States, because of the amount spent on State aid for employment to undertakings are very different at the level of individual Member States. Different is also the proportion of aid actually granted in the aid approved by the European Commission.

Summing up the considerations on the impact of State aid for employment on the indebtedness of EU Member States, it is worth adding that certain categories of disadvantaged workers and workers with disabilities still experience particular difficulties in entering and remaining in the labour market. For this reason, public authorities may apply measures providing incentives to undertakings to increase the levels of employment of these categories of workers, in particular of young people. As employment costs form part of the normal operating costs of any undertaking aid for the employment of disadvantaged workers and of workers with disabilities should have a positive effect on employment levels of those categories of workers and should not merely enable undertakings to reduce costs which they would otherwise have to bear. Consequently, such aid should be exempted from the notification requirement when it is likely to assist those categories of workers in entering or re-entering and remaining in the job market.

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### **References**

- [1] Biondi, A. (2013). State Aid is falling down, falling down: An analysis of the case law on the notion of Aid. *Common Market Law Review*, vol. 50, iss. 6, pp. 1719-1743.
- [2] Botta, M. (2016). Competition policy: safeguarding the Commission's competences in State aid control. *Journal of European Integration*, vol. 38, iss. 3, pp. 265-278.
- [3] Bumane, I. (2017). Favourable tax regimes that constitute selective state aid from the perspective of the cjeu recent case-law. *European Research Studies Journal*, vol. 20, iss. 3, pp. 231-245.
- [4] Communication (2005). Working together for growth and jobs - A new start for the Lisbon Strategy, Brussels 2.2.2005, COM 24.
- [5] Council of the European Union (1998). *Council Regulation (EC) No. 994/98 of 7 May 1998 on the application of Articles 92 and 93 of the Treaty establishing the European Community to certain categories of horizontal State aid*, OJ 1998 L 142/1.
- [6] Crafts, N. (2017). Brexit and State aid. *Oxford Review of Economic Policy*, vol. 33, pp. S105-S112.
- [7] European Commission (2000). *Commission communication concerning the guidelines on State aid for employment*, OJ 2000 C 371/12.

- [8] European Commission (2002). *Commission Regulation (EC) No 2204/2002 of 12 December 2002 on the application of Articles 87 and 88 of the EC Treaty to State aid for employment*, OJ L 337/3.
- [9] European Commission (2008). *Commission Regulation (EC) No 800/2008 of 6 August 2008 declaring certain categories of aid compatible with the common market in application of Articles 87 and 88 of the Treaty* (General block exemption Regulation), OJ L 214/3.
- [10] European Commission (2010a). *EUROPE 2020. A strategy for smart, sustainable and inclusive growth*, Brussels 3.3.2010, COM 2020 final.
- [11] European Commission (2010b). *An Agenda for new skills and jobs: A European contribution towards full employment*, Brussels 23.11.2010, COM 682 final.
- [12] European Commission (2014). *Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty*, OJ 187/1.
- [13] Eurostat (2018). *Statistics: employment aid* [online]. [cit. 2018-02-27]. Available: [http://ec.europa.eu/eurostat/tgm\\_comp/refreshTableAction.do;jsessionid=PU4IA7wNhGkAyAasizoOzDMmSF37HLP60OKQdg7OXopmNmh1Axlu!-1745625656?tab=table&plugin=1&pcode=comp\\_sa\\_01&language=en](http://ec.europa.eu/eurostat/tgm_comp/refreshTableAction.do;jsessionid=PU4IA7wNhGkAyAasizoOzDMmSF37HLP60OKQdg7OXopmNmh1Axlu!-1745625656?tab=table&plugin=1&pcode=comp_sa_01&language=en)
- [14] Ferčič, A. and Samec, N. (2014). European union state aid law and policy, and local public services. *Lex Localis*, vol. 12, iss. 2, pp. 267-287.
- [15] Ferri, D. (2015). Does accessible technology need an 'entrepreneurial state'? The creation of an EU market of universally designed and assistive technology through state aid. *International Review of Law, Computers and Technology*, vol. 29, iss. 2-3, pp. 137-161.
- [16] Guidelines (1995). *Guidelines on aid to employment*, OJ 1995 C 334/4.
- [17] Hölscher, J., Nulsch, N. and Stephan, J. (2017). State Aid in the New EU Member States. *Journal of Common Market Studies*, vol. 55, iss. 4, pp. 779-797.
- [18] Maurici, J. and Sargent, H. (2015). State aid in planning and compulsory purchase order cases. *Journal of Planning and Environmental Law*, iss. 6, pp. 621-643.
- [19] Nicolaides, P., and Schoenmaekers, S. (2015). The Concept of 'Advantage' in State Aid and Public Procurement and the Application of Public Procurement Rules to Minimise Advantage in the New GBER. *European State Aid Law Quarterly*, vol. 14 iss. 1, pp. 143-156.
- [20] Notice (1997). *Notice of monitoring of state aid and reduction of labour costs*, OJ 1997 C 1/10.
- [21] Pisapia, A. (2015). The role of EU state aid policy in enhancing the development of the industrial sector. *Privredna Kretanja i Ekonomska Politika*, vol. 23, iss. 123, pp. 45-64.
- [22] Podsiadło, P. (2016). Regional State Aid and Its Impact on the Competitiveness of the EU Member States. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 771-781.



- [23] Popović, D.V. and Caka, F. (2017). State Aid Control in South-East Europe: Waiting for a Wake-up Call. *European Business Organization Law Review*, vol. 18, iss. 2, pp. 333-349.
- [24] Stöllinger, R. and Holzner, M. (2017). State Aid and Export Competitiveness in the EU. *Journal of Industry, Competition and Trade*, vol. 17, iss. 2, pp. 203-236.
- [25] Treaty on European Union (TEU), Consolidated version 2016, OJ C 202/13.
- [26] Treaty on the Functioning of the European Union (TFEU), Consolidated version 2016, OJ C 202/47.
- [27] Tunali, Ç.B. and Fidrmuc, J. (2015). State Aid Policy in the European Union. *Journal of Common Market Studies*, vol. 53, iss. 5, pp. 1143-1162.

## A Theoretical Model to Explain the Rise of the European Precariat

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### **Abstract**

*In 2016, the level of unemployment in the EU-28 reflected the end of the crisis with an 8.5%. However, despite the European economic recovery, quantified by the stabilized unemployment rate and a GDP growth, the European poverty rate did not stop increasing since 2007. Thus, European Governments face a new uncertain but dramatic social phenomenon enhanced by the so-called European “gig economy” characterized as a race to the bottom in wages and labour rights bringing the impoverishment of workers.*

*The symptoms of this European pandemic are numerous such as the youth unemployment ratio of 20.9% in 2016; the deterioration of the European welfare system; the constant decrease of permanent fixed contracts and the incessant growth of temporary or involuntary part-time contracts combined with the false self-employed have caused a huge tide of precarious.*

*In this paper, firstly we identify the drivers that explain the emergence of the precarious population in Europe but we also build a compartmental discrete model to explain the growth of the precariat in the coming years for the case of Spain.*

**Keywords:** European “gig economy”, European poverty rate, European precariat, forecast, model

**JEL Classification:** C30, C63, I32

### **1. Introduction**

Last economic crisis started in August 2007 in United States spread throughout the world producing the European governments were not capable to maintain the level and quality of employment combined with the state of citizenship well being.

For the particular case of Spain, the level of youth unemployment is extremely high, wages have dropped considerably, University degrees are not balanced with salaries, labour stability has almost disappeared, pensions lost purchasing power, the population ages, losing citizens in during the last two years. Young people can not become independent at a reasonable age, nor do they think about having children and forming a family, (Standing, 2012; 2014).

In addition to the domestic issues experienced by European countries, Governments have to deal with migrants and refugees, secessionist problems, and the real threat of initial job

destruction from the impending Internet of Things economy, robotization and digitalization that will initially destroy a significant number of jobs.

It seems that, the economic effects of the crisis along with the low-cost labour competition of Asian countries, will continue to deteriorate European economies, and Spanish in particular. Macroeconomic growth does not translate into a real improvement of the employees and underemployed, and much less of the unemployed who are heading towards a horizon of poverty without solution.

For the particular case of Spain, the last Spanish governments have not been able to adapt the prevailing capitalism to distribute the benefits derived from the macroeconomic improvement. As a result they were not capable to transfer the economic improvement to the citizens. Governments do not want to regulate the markets, or interfering in the firms' managerial accounting what would result into policies about how firms must manage their performance and how they should distribute their results. Indeed, firms are used to pay low-level wages, (Srnicek, 2007). This fact has a long-term lethal effect for the maintenance of pensions because low contributions make it difficult to pay the future pensions of future generations, (Nachtwey, 2017). In addition, the average expectancy age increases annually, and because of this the volume of pensions and the public healthcare expenditures does too while the retirement age has not been delayed yet or at least in the same proportion.

Given this situation, it is natural that new parties, sometimes populist and extremist, across Europe find an important niche of electoral support that can threaten European unity.

The reaction of the marginalized, which are very large sections of the population, unemployed, temporary and partial workers, pensioners with insufficient pensions, is leading to the birth of the so-called collaborative economy (Bostman and Rogers, 2011), sharing flats, cars and substituting the paradigm of ownership for sharing, (Rifkin, 2011; Goldthorpe, 2016). Prior to the last crisis, the so-called middle class, decreased in a large proportion.

In this context the precarious citizen is defined as the adult who does not have a quality of income to become independent, or if s/he does, with the ability to make plans in the medium term, with a satisfactory state of well-being, (Barbieri, 2009).

In this paper, we propose a dynamic mathematical model to show how the precarious population will continue growing in Europe in the coming years. The proposed model is built for the particular case of Spain but it is applicable to any European country when data is available. The approach used in this paper has been recently considered when dealing with other social problems (De la Poza and Jódar, 2016; De la Poza *et al.*, 2016; 2017). Thus our compartment model (De la Poza *et al.*, 2017) measures the amount of the Spanish population by their degree of risk to become precariat over time. The relevance of this study relies on reporting the problem to public authorities responsible for addressing policies to stop this trend (Benach, *et al.*, 2014). Otherwise, future European generations will face dramatically the consequences of this social problem.

## **2. Problem Formulation and Methodology**

Undoubtedly, it is interesting to quantify the magnitude of the problem, that is, the amount of precarious people. On one hand, it is not expected the population composed of precarious citizens supports the "establishment" system. In Spain, the establishment embraces two parties that since 1978 have alternately divided up the Spanish government, that is, the Spanish socialist party (PSOE), and the conservative or popular party (PP). It is expected that the new

emerging parties such as Ciudadans and Podemos capture a large proportion of the electoral register, which was voting the two major parties only a few years ago (Rivero *et al.*, 2017).

In this work we propose a dynamic discrete model by firstly identifying the compartments in which the Spanish population is split at the initial time of the study (December 2017); secondly the drivers that determine the transits between subpopulations are identified; thirdly the transits between subpopulations are drawn.

The main contribution of this study consists of proposing a theoretical model by identifying and discussing the compartments/subpopulations and drivers that will let us quantify the size of the precariat population with the available data. The period of study must be short (December 2017 to December 2020), otherwise the hypotheses are not reliable. This model has been built by the researchers and previous applications of these type of epidemiological models have been previously applied to social problems such as De la Poza *et al.*, 2016 and De la Poza *et al.*, 2017.

## 2.1 Model and Data

In this paper we provide a dynamic population model (Haddad *et al.*, 2002) to analyse the size of the alarming social problem of population who lives in precarious condition. In order to quantify the size of the precarious population the first step consist of defining the concept of precarious. For this purpose it is necessary to understand that the term precarious implies a status quo. Individuals do not choose to be precarious, but the combination of factors affecting their life results into their transit to higher or lower degrees of precariat.

In fact, the population over 18 years old of a country can be split into 6 categories or subpopulations. Thus, our model is a compartment one (Haddad *et al.*, 2002) classifies and quantifies the population of a given country from 18 years old by their degree of precarious standard of life risk and their changes over time. We agreed with Sulich (2016) about youth's and young people's unemployment is a multidimensional problem, related to education, labour market, and demographic changes such as migration. However, the precarious situation does not only strike youth but also the overall population.

The proposed model is dynamic, that means the individuals may transit among categories. The intercompartmental transits are due to several reasons: demographic, labour stress, emotional stress, social contagion, drugs and alcohol abuse, technology, (De la Poza *et al.*, 2017; 2016). For building the model, the country of Spain has been considered in order to determine the sources of information required. However, the study can be applied to any European country.

Thus, the 6 categories to classify the Spanish population according to their level of precariat are:

L (n)=L: leisure people. It represents the population over 18 years old that is idle (lives on income) or is retired with sufficient income in the nth semester after December 2017, which corresponds to the initial time,  $n = 0$ . This population is assumed to remain constant for the period of study (Spanish Statistics Institute, 2016).

PL (n): professional training students, also university students (Bachelor and Master students) who are older than 18 years old. This category includes those people who will embrace the job market after they graduate or they already are part-time workers (in Spain this proportion is 30% part-time workers, OECD, 2018).

E (n): entrepreneurs. It represents the population of authentic entrepreneurs, in front of the false self-employed, who, forced by the gig economy are forced to be self-employed, so that

the companies of the capitalist platform can avoid the payment of social expenses (Spanish Statistics Institute, 2016).

F (n): fixed employed people. This category represents employees with permanent contracts, which include civil servants, public employees and employees of large corporations belonging to different sectors of activity such as banks, successful retail chains and commercial brands (Spanish Statistics Institute, 2016).

P (n): precarious people. It includes a large population of false self-employed workers, non-registered household workers, all types of temporary and part-time employees (excluding those who are students at the same time, 30%, OECD, 2018), pensioners with insufficient pensions and unemployed people.

The last category embraces the marginalized population, M (n), which includes marginalized sectors such as gypsies, refugees and undocumented immigrants, convicted prisoners (Spanish Statistics Institute, 2016).

Starting from an approximate initial population in December 2017, corresponding to  $n = 0$ , the initial population of each subcategory is calculated.

As it was said before, these populations may vary continuously (with the exception of the leisure category,  $L(n)=L$ , that is considered constant for the period of study), from semester  $n$  to semester  $n+1$ , and they do so by addressing several factors, which are enumerated as follows:

1. Demographic factor: population changes due to their entry or exit in the system. Thus, they entry in the system when they become 18 years old and they exit the system when they die. In addition, this factor considers the net migration balance resulting from subtracting those who immigrate to the country less those who emigrate (Spanish Statistics Institute, 2016).
2. Economic factor: the level of incomes received and the type of contract produces the transit of population between categories. This factor is measured in terms of the percentage of unemployment population (Spanish Statistics Institute, 2016).
3. Work Stress factor: it expresses the stress suffered by the labour conditions of workers who can be afraid of losing their jobs but they even can be victims of mobbing. This factor is quantified by the temporary contracts but also by the proportion of population suffering from mobbing (Spanish Statistics Institute, 2016).
4. Emotional stress factor: it is defined as the stress suffered by experiencing the loss of a close relative or a friend. This situation can derive into the transit of the person from one category to another (De la Poza *et al.*, 2016).
5. Alcohol and Drug Consumption factor: this factor collects the impact of alcohol and drug abuse of individuals, (De la Poza *et al.*, 2016).
6. Technology, motivated by robotization, digitalization and internet of things. The technology revolution is producing the massive replacement of works by robots.

Demographic data are obtained from the Spanish Institute of Statistics. The data of precarious pensioners and unemployment comes from the Spanish Office related to social issues but also from the Spanish Institute of Statistics. The other transit coefficients are built from different sources.

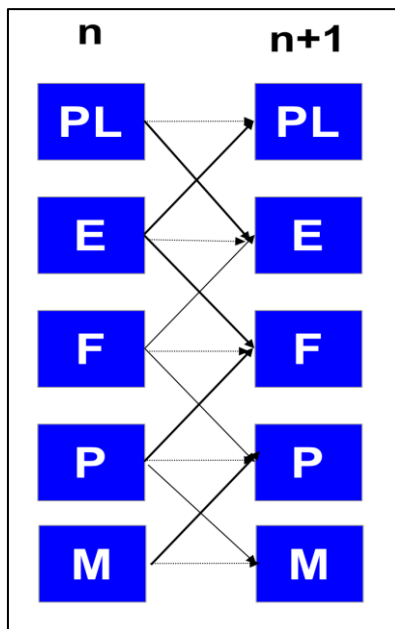
### 3. Problem Solution

The proposed model is a system of equations in difference that let us compute the value of each subpopulation at semester  $n$ . The variation of the size of each subpopulation by semester is explained by the shifts among subpopulations. These movements can be quantified according to the transit coefficient built.

It is important to remark that a transit coefficient measures the proportion (or probability) of transit from the origin compartment subpopulation to move to the destination compartment subpopulation. So transit coefficients take values within the interval  $(0, 1)$ . The construction and estimation of transit coefficients is based on the hypotheses made mainly and according to information provided by Spanish Statistics Institute, (2016).

Considering the variation of these subpopulations, block diagram is presented

**Figure 1: Block Diagram,  $n$  Denotes Semester.**



The general expression of the model is:

$$PL(n+1)-L(n) = -\alpha_i(n) \cdot PL(n) + \beta_{ii}(n) \cdot E(n) + b_1$$

$$E(n+1)-E(n) = -\alpha_i(n) \cdot E(n) - \beta_{ri}(n) \cdot E(n) + \beta_{ii}(n) \cdot F(n) + \alpha_i(n) \cdot PL(n) + b_2$$

$$F(n+1)-F(n) = -\alpha_i(n) \cdot F(n) + \alpha_i(n) \cdot E(n) - \beta_{ri}(n) \cdot F(n) + \beta_{ii}(n) \cdot P(n) + b_3$$

$$P(n+1)-P(n) = -\alpha_i(n) \cdot P(n) + \alpha_i(n) \cdot F(n) - \beta_{ri}(n) \cdot P(n) + \beta_{ii}(n) \cdot M(n) + b_4$$

$$M(n+1)-M(n) = -\alpha_i(n) \cdot M(n) + \alpha_i(n) \cdot P(n) - \beta_{ri}(n) \cdot M(n) + b_4$$

The coefficients  $\alpha_i(n)$  and  $\beta_{ri}$  express and quantify the transits among subpopulations PL, E, F, P and M.

In addition, the model relies on the one semi-annual jump principle, which assumes individuals transit at the most from one category to another during one semester period. Also, the transits can split into two types:  $\alpha_i(n)$  and  $\beta_{ri}$ ;  $\alpha_i(n)$  implies a jump to a higher risk category while  $\beta_{ri}$  means a jump to a lower risk category.

#### 4. Conclusion

The paper proposes a model that identifies and classifies the overall population of a country according to the level of risk of individuals to become precariat. The model is dynamic, that explains the subpopulations change over time. For this reason, the transits coefficients must be built based on hypotheses and data. The study identifies the drivers that determine the transit between subpopulations. One of the model's potential utilities is to diagnose the magnitude of this social problem. In addition, the model can be applied to any European country, when data is available.

Further result will let us quantify the initial subpopulations and the transit coefficients to measure the changes among subpopulations following the thinking of Michael Faraday: what is not measured is not controlled and cannot be improved (Fischhoff and Kadvaný 2011).

Finally, the results obtained by the application of the model can be useful as an input for public authorities to pay attention to this social problem and policies might be addressed on the relevant issues for guaranteeing citizens well being.

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#### References

- [1] Barbieri, P. (2009). Flexible Employment and Inequality in Europe, *European Sociological Review*, Volume 25, Issue 6, 1, pp. 621–628
- [2] Benach, J., Vives, A., Amable, M., Vanroelen, C., Tarafa, G., Muntaner, C. (2014). Precarious Employment: Understanding an Emerging Social Determinant of Health. *Annual Review of Public Health*, 35, pp. 229-253.
- [3] Bostman, R. and Rogers, R. (2011). *That's Mine is Yours*, Collins. London: Paper Collins.
- [4] De la Poza, E. Jódar, L. (2016). Modelling European Socio-economic-political Issues: The Spanish Mortgage Market. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 782-789.
- [5] De la Poza, E., Jódar, L., and Barreda, L. (2016). Mathematical Modeling of Hidden Intimate Partner Violence in Spain: A Quantitative and Qualitative Approach, *Abstr. Appl. Anal.*, 2016 (30): 1-8.
- [6] De la Poza, E., Jódar, L., and Ramírez, L. (2017). Modelling bullying propagation in Spain: a quantitative and qualitative approach. *Quality and Quantity*, <https://doi.org/10.1007/s11135-017-0541-4>.
- [7] Fischhoff, B., and J Kadvaný. 2011. *Risk. A Very Short Introduction*. Oxford: Oxford University Press.

- [8] Goldthorpe, J.H. (2016). *Sociology as a Population Science*. Cambridge: Cambridge Univ. Press.
- [9] Haddad, W. M., Chellaboina, V. and Nersesov, S. G. (2002). Hybrid nonnegative and compartmental dynamical systems, *Math. Probl. Eng.*, vol. 8, no. 6, pp. 493–5
- [10] Nachtwey, O. (2017). *La sociedad del descenso*. Madrid: Paidós.
- [11] OECD Labor force Statistics (2018). Statistics [online]. Available at: [http://www.oecd-ilibrary.org/employment/oecd-labour-force-statistics\\_23083387](http://www.oecd-ilibrary.org/employment/oecd-labour-force-statistics_23083387)
- [12] Standing, G. (2012). *The Precariat. The New Dangerous Class*. London: Bloomsbury.
- [13] Rifkin, J. (2011). *The Zero Marginal Cost Society*. New York: Palgrave Macmillan.
- [14] Rivero, A., Zarzalejos, J. and Del Palacio, J. (2017). *Geografía del Populismo*. Madrid: Tecnos.
- [15] Spanish Statistics Institute (2016). Statistics [online]. Available at: <http://www.ine.es>
- [16] Srnicek, N. (2007). *Platform Capitalism*. London: Polity Press, 2007.
- [17] Standing, G. (2014). *A precariat charter*, London: Bloomsbury.
- [18] Sulich, A. (2016). The Young People's Labour Market and Crisis of Integration in European Union. In International Conference on European Integration. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 926-934.



## **Evaluation of the Potential and Opportunities to Boost an Economic Growth in the EAEU Member States**

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### **Abstract**

*In modern conditions the international integration processes act as pledge of the states' sustainable development, activization of investment cooperation, implementation of joint perspective projects. The emergence of new international economic integration organizations predetermines the need to rethink the patterns of development models of international economic integration processes, especially in the context of their impact on the economies of the participating countries. Economic studies show that the EAEU integration has exerted a beneficial effect on mutual trade. It encouraged the foreign investments and facilitated the development of particular industries. The aim of the paper is to evaluate of the potential and opportunities to boost an economic growth in the EAEU Member States. The authors created approach to study of international economic integration influence on development of EAEU members. Further collaboration of the Member States will create the opportunities for industry development, improvements in infrastructure, transportation, and logistics in frame of the Union. It also will facilitate the cooperation ties and, finally, raise the living standards.*

**Keywords:** *international economic integration, economic potential, economic growth, Eurasian Economic Union (EAEU), international economic integration influence*

**JEL Classification:** *C18, F02, F15, F36, F63*

### **1. Introduction**

Regional economic cooperation allows using wide range of integration tools to stimulate states' economic, social and technological development. The Eurasian Economic Union of the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic, and the Russian Federation can be an example of such interaction.

Today regional integration in Eurasia has reached qualitatively new level. The Eurasian Economic Union is established on the basis of the Treaty on the Eurasian Economic Union dated May 29, 2014. The EAEU currently operates as an international organisation of regional economic integration and has the international legal personality (Pridachuk, Tolstel, 2016).

The Treaty on the EAEU identified the following key development goals: to create proper conditions for sustainable economic development of the EAEU Member States in order to

improve the living standards of their population, to seek the creation of a single market for goods, services, capital and labour force within the Union as well as to ensure comprehensive modernisation, cooperation and competitiveness of national economies within the global economy.

In order to achieve these goals an internal market of the Member States within the Union was created and agreed (coordinated) policies in key sectors of the economy are implemented.

Thus, the integration capacity of the Union in conjunction with the existing national sustainable development measures objectively contributes to the SDGs achievement by the Member States.

In particular, cooperation of the Member States in the regulation of labour migration within the Union contributes to a more efficient distribution of labour force, unemployment reduction as well as establishment of decent working conditions for citizens. Integration liberalisation of markets for goods, services and capital stimulates business development and increases public access to a wide range of services, including financial, thus contributing to the healthy competition.

At the same time, the existing differences in the levels of economic, scientific, technological and institutional development, as well as the degree of influence of internal and external challenges on the national economy, determine the specifics of the basic development measures implemented by each Member State.

The aim of the paper is to evaluate of the potential and opportunities to boost an economic growth in the EAEU Member States.

## ***1.1 Overview of the Economic Development' Dynamics and Present Status of the EAEU Members' Competitiveness***

### *1.1.1 The Eurasian Economic Union: Realities of the Member States Economies' development*

An analysis of the economic development of the Member States shows that when responding to the social and economic challenge by common areas of economic development and structural reforms in the period 2010-2015, were the maintenance of macroeconomic stability and the increased competitiveness of national economies. At the same time, the possibilities for transforming the existing structures of the Member States economies were limited, including due to turbulence in the world economy.

Over the past years, the most dynamic growth among the EAEU countries was in the economies of Armenia, Kazakhstan and Kyrgyzstan. The data of the economy through the implementation of stabilizing economic policies and less influence of unfavourable external conditions overcame the difficulties of 2014-2016 more confidently about Belarus and Russia. Compared with the world GDP, between two episodes of decline in economic activity (from 2009 to 2016), only two economies of the EAEU have exceeded the average world GDP growth rates: Kazakhstan and Kyrgyzstan. The low level of Armenia's GDP was due to a deeper economic decline in 2009 compared to the rest of the EAEU states. At the same time, there is a gap in the growth rates of the economies of Russia, Belarus and the world average growth rates. The weakest growth among the EAEU countries is demonstrated by the economy of Russia due to a double shock, the adaptation to which continues from 2014 (the sanction regime of the economy and the double drop in world oil prices).

Taking into account global economic changes, the first results of the EAEU functioning are very tangible: a good institutional shell has been created, the main barriers to the movement of production factors have been eliminated, and single markets have been formed. As a result, the tendency of convergence and improvement of individual indicators of social and economic development was manifested.

The correctness of the chosen integration direction proves the growth for 2010-2015 of the GDP of the EAEU at purchasing power parity (PPP) by 23.4% to 4247.6 billion US dollars, which is 22659 US dollars per capita (Table 1).

**Table 1: Gross Domestic Product per Capita by PPP (US dollars)**

	2005	2010	2015	2017
<b>Armenia</b>	4716	6376	8419	9006
<b>Belarus</b>	8639	16929	18223	18349
<b>Kazakhstan</b>	14259	19690	24727	25942
<b>Kyrgyzstan</b>	2110	2734	4350	3670
<b>Russia</b>	11822	20498	23703	27466
<b>EAEU</b>	11508	19443	22659	26256

Source: IMF (2017)

The tendency of economic development level' equalization among the Member States of the EAEU was observed: the gap in the GDP per capita by PPP among the EAEU Member States: decreased from 7.67 times in 2010 up to 7.56 times in 2015, and in GDP per capita - from 11.6 in 2010 to 9.1 in 2015.

An essential change in the foreign trade of the Member States in 2010-2015 is not to change the dynamics, but to improve its structure. In the structure of foreign trade, the share of services increased (from 11% in 2010 to 13.95% in 2015, in imports from 22.4% in 2010 to 29.15% in 2015). The outpacing rates of growth demonstrated final consumer goods in comparison with intermediate goods, which indicate an increase in the level of processing of the export products of the EAEU and the improvement of the exports structure from the EAEU. The share of hydrocarbon raw materials in the structure of exports declined from 54.3% in 2010 to 47.9% in 2015, and as a result, non-oil and gas exports by the end of 2015 accounted for more than half of the total export of EAEU Member States' goods.

Also positive results of the foreign trade development of the EAEU Member States are confirmed by the improvement of their positions in the Index of the countries' involvement in the international trade of the IEF. Mutual foreign direct investment following the results of 2014 showed growth and a fairly even distribution (the share of the Russian Federation decreased, and the shares of the Republic of Belarus and the Republic of Kazakhstan grew) (Table 2).

Regarding the response to the social and economic challenge, it should be noted that the potential of the EAEU is still not being implemented sufficiently. As a consequence, the expectations of business and citizens from the fact of the establishment of the EAEU, related to its role in modernizing the economies and improving the quality of citizens, remain unrealized.

### 1.1.2 The Global Competitiveness Index and Assessing Progress Toward the EAEU' Sustainable Growth

The Global Competitiveness Index has been used as an important tool by policymakers of many countries over the years. Since its first publication in 2005, the Global Competitiveness Index (GCI) has been used by the World Economic Forum to assess the level of productivity of an economy, which determines its long-term growth potential.

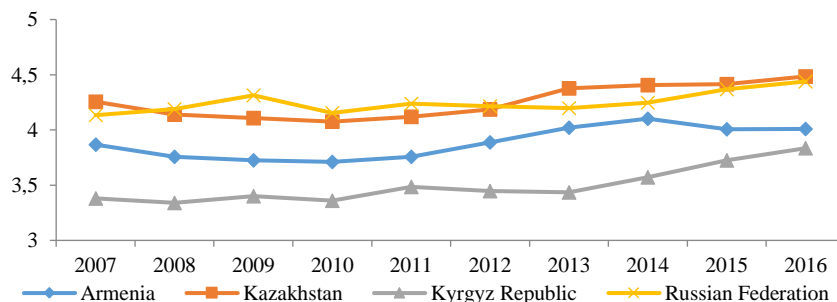
**Table 2: Direct and Mutual Investments to the EAEU Member States (During the Reporting Period)**

	2010	2014	2015
Direct investments to the EAEU Member States, million US dollars, including:	<b>52984</b>	<b>31870</b>	<b>15902</b>
Mutual investments to the EAEU Member States, million US dollars, including into:	<b>858</b>	<b>1818</b>	<b>2106</b>
<b>Armenia</b>	5	109	130
<b>Belarus</b>	934	617	736
<b>Kazakhstan</b>	-225	485	214
<b>Kyrgyzstan</b>	76	148	513
<b>Russia</b>	68	460	513
Share of mutual direct investments in the total direct investment of the EAEU, percent	1.6	5.7	13.2
<b>Armenia</b>	0.9	26.8	73.1
<b>Belarus</b>	67.0	33.1	44.5
<b>Kazakhstan</b>	-3.0	6.7	3.3
<b>Kyrgyzstan</b>	17.4	42.6	44.9
<b>Russia</b>	0.2	2.1	7.9

Source: Eurasian Economic Commission (2017)

This open-endedness is captured within the GCI by including a weighted average of many different components, each measuring a different aspect of competitiveness. The components are grouped into 12 pillars of competitiveness: Institutions; Infrastructure; Macroeconomic environment; Health and Primary education; Higher education and Training; Goods market efficiency; Labour market efficiency; Financial market development; Technological readiness; Market size, both domestic and international; Business sophistication; Innovation (World Economic Forum (2016)).

**Figure 1: The Global Competitiveness Index: the EAEU Countries' Review (Period 2007-2016)**



Source: own elaboration on the basis of the Competitiveness Dataset (2016)

Figure 1 shows changes in the positions of The GCI ranking. According to the Index, the EAEU countries' competitiveness increased very little compared to the preceding year. At the time of writing, the Russian economy continues to face many deeply rooted challenges that will have to be addressed for the country to strengthen its competitiveness. It is reflected not only on the Russian economy, but also on the EAEU economies, instantly depriving them long-term growth potential (Tolstel, Pridachuk, 2016).

## **2. Methodological Approach to Assessing the Dynamics of Economic Activity in the EAEU Member States and its Short-Term Prospects**

The EAEU Member States passed the phase of economic activity recovery. It is expected that its positive dynamics will continue in the short term, as evidenced by the concurrent and outrunning indicators calculated by the Department of Macroeconomic Policy of the Eurasian Economic Commission. The growth of the level of economic activity is expected in the economies of Armenia, Belarus and Kyrgyzstan. At the same time, the growth rates in Belarus are approaching the growth rates of the fast growing economies of the Union, among which Armenia occupies a leading position. In Kazakhstan and Russia, economic activity will be at a level close to the current values (Eurasian Economic Commission, 2017).

### **2.1 Model and Data**

The Consolidated Convergent Indicator (CCI) and the Consolidated Lead Indicator (CLI) are calculated by the Department of Macroeconomic Policy of the Eurasian Economic Commission for Armenia, Belarus, Kazakhstan (jointly with the Institute for Economic Research under the Ministry of National Economy of the Republic of Kazakhstan), Kyrgyzstan and Russia in accordance with the methodological approaches developed based on the recommendations of the OECD.

Both indicators (CCI and CLI) are measured in percentage points. As a conditional level, a value of 100 percentage points was adopted, corresponding to the average value of each indicator for the entire observation period (since January 2000). Calculation of indicators is carried out monthly. In addition, the accuracy of the indicators is periodically checked, and if necessary, the indicators are adjusted, on the basis of which the indicators are calculated (calibration is performed).

CCI characterizes the current dynamics of economic activity and is built on the basis of indicators published on a monthly basis and characterizing the development of economic activities that have the most significant impact on economic development. Economic activity is defined as medium-term GDP fluctuations that are not seasonal, around a long-term trend. Given the latest calibration for countries for which there is no monthly GDP data, they are:

Armenia: the volume of industrial production, the retail turnover, the volume of paid services provided to the population, the volume of investment in fixed assets, the volume of agricultural production;

Kazakhstan: the volume of industrial production, the retail turnover, the volume of construction, the output of agricultural products;

Russia: the volume of industrial production, the retail turnover, the volume of investment in fixed assets.

Data on GDP were used as CCI for Belarus and Kyrgyzstan due to the availability of their publications on a monthly basis.

CLI characterizes short-term prospects for the dynamics of economic activity (an average of 2-3 months) and allows to making a conclusion about the expected growth (positive or negative) of economic activity or about the absence of changes. The conclusion is made on the basis of the change in the value of the CLI in recent months: the repetition of the sign "+" or "-" for three consecutive months or alternating the corresponding sign with "0" for 5 months shows the presence of a trend. In other cases, the situation is interpreted as the absence of a trend of changes in economic activity. CLI is calculated on the basis of a leading indicators set, which are periodically (usually 2 times a year, but if necessary quarterly) selected according to the procedure fixed in the methodological approaches.

Table 3 shows the dynamics of economic activity in the EAEU Member States and its short-term prospects.

**Table 3: The Dynamics of Economic Activity in the EAEU Member States and its Short-Term Prospects**

EAEU Member States	GDP growth	CCI	CLI			Expected Trend until February 2018
	January – November 2017 (approximation)	November 2017	November 2017	change in the last 6 months	change in the last 3 months	
Armenia	+6.1	100.7	100.3	+0.4	+0.3	Economic Activity Increase
Belarus	+2.2	101.0	100.8	+0.8	+0.5	Economic Activity Increase
Kazakhstan	+3.9	98.8	100.3	-0.1	+0.1	Economic Activity Stabilization
Kyrgyzstan	+4.0	99.8	101.5	+1.3	+0.5	Economic Activity Increase
Russia	+1.4	100.0	100.4	+0.1	+0.1	Economic Activity Stabilization

Source: Eurasian Economic Commission (2017)

## 2.2 Factors of Risks

The risks of the Member States economic growth are due to external and internal factors. At the same time, after a decline in world oil prices and their stabilization within the conditional corridor (40-60 US dollars per barrel), the risk of a new sharp decline in oil prices below 40 US dollars per barrel is unlikely. The budgets of the Member States for the medium term were adopted on the basis of the minimum level of oil prices. At the same time, the expected tightening of monetary policies of the FED and the ECB can significantly affect the state of the external balances of the EAEU states in view of the possible outflow of capital.

Internal risks of the sustainable development of Member States are associated with low consumer and investment activity and the prevalence of unfavourable expectations about their future dynamics (Klenow, Rodriguez, 1996). The worsening of the external economic situation in recent years, the decline in living standards, the active measures of economic policy, in terms of limited growth in budget expenditures, and the persistence of high interest rates, have led to a deterioration in the expectations of economic agents. Decrease in households' demand in a number of the EAEU countries is caused by a decrease in real incomes of the population,

a decrease in investments in fixed assets - unfavourable expectations of economic agents (Gertler, 1988). Taking into account the planned measures to consolidate the budgetary policy in all the countries of the EAEU, the support of domestic demand from the budget funds will decrease, which creates high risks of maintaining weak domestic demand.

Maintaining relatively high interest rates by central (national) banks of the EAEU states in order to reduce both inflation levels and preserve the attractiveness of assets in national currencies (overcoming high dollarization) contain the risks of limiting GDP growth, and in case of premature policy mitigation they will contribute to outflows of capital from the EAEU countries (Rajan, Zingales, 1998).

### **3. Problem Solution**

The potential of economic integration between the Member States is determined by the following factors.

Firstly, the potential growth of mutual trade will be ensured by gradual elimination of non-tariff barriers, exemptions.

Secondly, the development of manufacturing variety, new value added chains, as well as infrastructural, industrial, innovative, and other integration projects will promote an export growth and import substitution from the third countries.

Thirdly, the integration will lead to the “economies of scale” effect (Ross, 1998).

Fourthly, integration will attract extra foreign direct investments (FDI) both mutual and from the third countries. Profitability of the FDI will be achieved mostly due to the large single market and the Member States’ competitive advantages.

Finally, the realization of integration potential will facilitate the multiplication effects in the certain sectors of economy such as transport, electric power, financial markets, but also in the sectors of economy, which benefit from the size of the market. Moreover, additional impulse for growth of new spheres will be based on intensification of mutual cooperation instead of competition on the common markets (Beck, Levine and Loayza, 2000).

The extra growth of the EAEU GDP as a result of integration measures is estimated near 2.9% by 2030 or 211.4 billion US dollars in current prices. Member States’ results of integration depend on the scale of economies: for the Republic of Belarus it will be the most significant +13.1% of GDP, for the Republic of Kazakhstan +10.4% of GDP, and for the Russian Federation +1.4% of GDP.

### **4. Conclusion**

As shown by the analysis of the impact of different economic integration levels within the Eurasian Economic Union on the socio-economic development of the participating countries, the potential for enhancing the economic effect of integration remains significant. It will increase due to the growth of mutual trade - its share remains significantly lower than in the EU and other regional associations, and through deepening integration, with the creation of the EAEU will cover not only market of goods but also the services market, labour and capital, which requires an appropriate institutional support (Pollack, 2001).

The expansion of the economic space greatly increases the potential of existing opportunities, which dramatically enhances the effect of the mentioned factors, differentiating and increasing their variability, this is especially important under the conditions of global instability. Further

collaboration of the Member States will create the opportunities for industry development, improvements in infrastructure, transportation, and logistics in frame of the Union. It also will facilitate the cooperation ties and, finally, raise the living standards.

## References

- [1] Beck, T., Levine, R. and Loayza, N. (2000). Finance and the Sources of Growth. *Journal of Financial Economics*, Vol. 58 (January), pp. 261-300.
- [2] Eurasian Economic Commission (2017). *Reports* [online]. [cit.2018-02-15]. Available at: [http://www.eurasiancommission.org/en/act/integr\\_i\\_makroec/Documents/%D0%A6%D0%A3%D0%A0%20\\_Eng.pdf](http://www.eurasiancommission.org/en/act/integr_i_makroec/Documents/%D0%A6%D0%A3%D0%A0%20_Eng.pdf).
- [3] Gertler, M. (1988). Financial structure and aggregate economic activity: an overview. *Journal of Money, Credit, and Banking*, vol. 20, pp. 559-588.
- [4] IMF (2017). *World Economic Outlook Database* [online]. [cit.2018-02-15]. Available at: <http://www.imf.org/external/pubs/ft/weo/2017/01/weodata/weorept.aspx>.
- [5] Klenow, Peter J. and Rodriguez, C. (1996). Economic Growth: A Review Essay. *Journal of Monetary Economics*, Vol. 40(3), pp. 597-617.
- [6] Pollack, M.A. (2001). International relations theory and European integration. *Journal of common market studies*, vol. 39, iss. 2, pp. 221-244.
- [7] Pridachuk, M. and Tolstel, M. (2016). International Economic Integration: Realities and Perspectives (the case of Eurasian Economic Union (EEU)). *Proceedings of the 3rd International Conference on European Integration 2016 Ostrava, 2016, 1st edition*. - VŠB - Technical University of Ostrava, Czech Republic - 1142 p. – pp. 790-799.
- [8] Rajan, R. and Zingales, L. (1998). Financial dependence and growth. *American Economic Review*, vol. 88, pp. 559-586.
- [9] Ross, L. (1998). Robert J. Barro, Determinants of Economic Growth: A Cross-Country Empirical Study. *Journal of Comparative Economics*, Elsevier, vol. 26(4), pp. 822-824.
- [10] The Competitiveness Dataset (2016). [online]. [cit. 2016-08-02]. Available: [www3.weforum.org/docs/gsr/2015-2016/GCI\\_DataSet\\_2006-2015.xlsx](http://www3.weforum.org/docs/gsr/2015-2016/GCI_DataSet_2006-2015.xlsx).
- [11] Tolstel, M. and Pridachuk, M. (2016). Regional Integration as the Factor of National Economies's Development under the Condition of Globalization (The case of the Eurasian Economic Union). *Proceedings of the 16th International Scientific Conference Globalization and Its Socio-Economic Consequences* University of Zilina, Department of Economics 5th – 6th October 2016 Rajecke Teplice, Slovak Republic – 2515 p. – pp. 2212-2219.
- [12] World Economic Forum (2016). *Global Competitiveness Report*. [online]. [cit. 2016-08-02]. Available: <http://reports.weforum.org/global-competitiveness-report-2015-2016>.



# The Eastern Caribbean Currency Union Versus the Optimal Monetary Area

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## **Abstract**

*As an alternative to the Eurozone research, the purpose of the paper is to present the criteria of the classical optimal monetary areas theory as met by the Eastern Caribbean Currency Union, and to present the most important benefits and potential losses resulting from monetary integration in the above-mentioned region. An attempt was also made to answer the research question regarding the description of factors determining successful monetary integration under the ECCU. The success of the Union proves that having met the criteria of the classical theory is not always the main factor determining the success of monetary integration. Certain criteria met by the ECCU countries, together with their common history, geographical proximity and similar economies are sufficient to create an optimal monetary area, understood as an area in which the introduction of common currency brings more gains than losses.*

**Keywords:** *currency union, Eastern Caribbean Currency Union, monetary integration, optimal monetary area, optimal monetary areas theory*

**JEL Classification:** *F33, F36, F45*

## **1. Introduction**

There is no doubt that monetary integration constitutes a remedy to the problems related to the risk of fluctuations in foreign exchange rates, of crises and currency wars, as well as other dangers resulting from the imperfections of the contemporary international monetary system. However, as a result a country is deprived of its own monetary policy – an important instrument in its economic policy, especially when it comes to mitigating or preventing negative economic shocks. This is why candidates for, but also members of the currency union should monitor the economic criteria in the form of adaptation mechanisms, efficiently absorbing negative economic shocks or lowering the risk of such a shock occurring in the first place. They can also survey the economic costs and benefits of their participation in the union (Gyoerk, 2017, pp. 893–921).

In general, the literature on the subject identifies three approaches to the theory of the optimum currency area: exogenous, endogenous, and an analysis of costs and benefits of participating in a currency union (Krasiuk, 2013, p. 126). The criteria levelling the negative effects of monetary integration have been specified in the classical theory of optimum currency area, which supposes that mitigating the effects of negative asymmetric shocks occurring between countries will be happening spontaneously, provided that they are equipped with suitable adaptation mechanisms (i.e. specific conditions necessary to avoid or absorb such a shock are

met). According to the second approach, countries in a currency union do not have to form an *ex ante* optimum currency area, due to the fact that, as a result of increased economic co-operation, their economies will become similar and business cycles will converge. However, the analysis of costs and benefits concentrates at establishing which outcomes of the integration will prevail after joining the currency union (Kraciuk, 2013, p. 127).

The purpose of the present study is to define the criteria of the classical theory of optimum currency areas met by the East Caribbean Currency Union, as well as to present the most important benefits and losses resulting from monetary integration in the region. The particular Union was chosen deliberately, due to its distant geographical location and low levels of popularity in Europe while providing good material for analysis to study the processes of monetary integration. At the same time, it should be noted that the ECCU is rarely studied. Recently research on the ECCU has been conducted by: S. Braithwaite (Braithwaite, 2017), A.H. Hallett and S.E.H. Jensen (Hallett and Jensen, 2016) and A. Mounsey and D.T. Polius (Mounsey and Polius, 2015).

The non-reactive research method – analysis alongside descriptive synthesis – and comparative method were applied in the research process. They were based on the professional literature on the subject, as well as reports and statistics by international institutions, and aimed at answering the research question regarding the description of factors determining successful monetary integration in the region. A conceptual apparatus typical for research in economy and international finances was applied. The paper constitutes a study of selected problems and does not aspire to exhaust the extensive range of problems within the subject. The research was completed on 20<sup>th</sup> February 2018.

## **2. The Nature of an Optimum Currency Area in Theoretical Deliberations**

The deliberations on the subject of the process of monetary integration started in the 1960s. In 1961, R.A. Mundell introduced the notion of optimum currency area. He states that the condition which needs to be met in order to single out a group of countries constituting an OCA is the high mobility of production factors, particularly the workforce, which supports the process of introducing the common currency through minimising the asymmetrical shocks such as unemployment and inflation. According to him, an OCA is characterised by two basic features – high internal mobility of the workforce and capital, combined with low external mobility, which is a necessary criterion, but which applied in isolation is insufficient to determine an OCA. Such an area is supposed to be using one common currency, while the exchange rate between the area in question and other regions should be floating (Mundell, 1961, pp. 657–665).

The lack of a complete solution as regards the requirements for distinguishing an optimum currency area presented by R.A. Mundell left an open door for other theoreticians, one of whom was R.I. Kinnon. He replaced the mobility criterion with an open economy criterion, i.e. low or non-existent trade barriers between the countries undergoing integration (Lachowicz, 2008, p. 10). As maintained by R.I. Kinnon, the mechanism of fixed exchange rate is more favourable to small and open economies which have strong trade connections, due to which they can ensure stable prices and limit the costs related to exchange. On the other hand, big and (as a result) relatively closed off countries, should apply floating exchange rates (McKinnon, 1963, pp. 717–725). P.B. Kenen, in his turn, regarded structural differentiation of national economies as a significant condition to distinguish such an area. He thought that if one sector of an economy was to be affected by a crisis, a speculative attack or demand shock, the other ones will be able to shoulder the burden of stabilising the economy and, to a greater or lesser extent, compensate for the resulting losses (Kenen, 1969, pp. 41–60). According to

him, big economies, which at the same time are usually more diversified, ought to have a fixed exchange rate. However, J.C. Ingram noticed that in financially integrated countries free movement of capital can be utilised as an adaptation mechanism to restore balance (Urban and Baranowski, 2003, p. 56). The capital then follows the variable interest rates, which results in more effective use of resources (Ingram, 1969, pp. 95–100). Then in turn G. von Haberler and M.J. Fleming proposed convergent inflation rates as the criterion for establishing an OCA, pointing out that it is a significant, but not the only premise for currency integration. The inflation rate which remains at a similar level in the countries of a currency union helps to maintain stable prices internally and to keep the balance of payments, as well as level the conflicts related to the manner in which monetary policy is being conducted (Fleming, 1971, pp. 467–488). D.A. Snider was the first to clearly indicate that to achieve an OCA not only monetary, but also fiscal integration is necessary. He claimed that only single, centralised tax authority guarantees stabilisation of prices, employment and balance of trade without the necessity to resort to limiting the movement of capital (Snider, 1967, pp. 13–17). As stated by O. Issing, currency integration is one of the outcomes of economic integration, and together they lead to political integration (Issing, 2001). He did not account for an opposite interaction, i.e. economic integration resultant from precedent currency integration.

The change in perspective in looking at the process of currency integration was proposed by I. Frankel and A. Rose, who claimed that it is not necessary for countries accessing the union to meet the criteria of the classical theory *ex ante*, as it is possible to achieve that *ex post* as well (the endogenic approach to the OCA theory). Owing to the adoption of common currency, trade and mobility of production factors between the countries of the union increase, resulting in approximation of the business cycles and opening of the economies of the countries in question (Urban and Baranowski, 2003, p. 58). Due to initiated integration processes, countries are able to absorb possible negative asymmetric shocks more effectively.

Due to the fact that countries did not meet most of the criteria indicated in the classical theory of optimum currency areas, and monetary integration bears numerous consequences for participating countries, both positive and negative, economic and non-economic, a new approach emerged in the 1970s as regards research on optimum currency area, based upon the analysis of costs and benefits of currency integration (Ładyka, 2001, p. 173). The new approach was proposed by H.G. Grubel, who defined OCA as an area in which the common currency facilitates the growth of the wealth of the citizens of participating countries. In order to confirm if an area belongs to an OCA one needs to analyse if the benefits of monetary integration outweigh the losses, while monetary integration is not necessarily connected to economic integration (Grubel, 1970, pp. 318–324). This is an innovative approach, as the previous deliberations were focused on the angle of minimising the costs related to asymmetric shocks and did not sufficiently take potential benefits of monetary integration into consideration (Zawiślińska, 2008, pp. 55–58). P. Krugman contributed to this approach as well. According to him, the benefits of monetary integration must balance the negative occurrences related to the impossibility to use the instruments of monetary policy to intervene in case of differences in pricing and remunerations between the countries of a union (Krugmann, 2013, pp. 439–440). Referring to H.G. Grubel's concept, G.E. Wood concluded that the key criterion while deciding on currency integration ought to be the prevalence of benefits over costs (Wood, 1973, pp. 1–23). Among the former he listed greater self-sufficiency of the economy of the currency area, a possibility to diminish and merge their foreign exchange reserves needed to operate foreign trade, simultaneously rendering the entire area less vulnerable to speculative attacks from the outside. However, W.M. Corden named the stability of prices and trade flows and limiting the speculative movement of capital as the

advantages of integration. The main cost which he pointed out is the departure from internal stability (Corden, 1972, pp. 1–41). Research on the costs and benefits of currency integration has also been conducted by, among others, R. Heller (Heller, 1972, pp. 1–41) and Y. Ishiyama (Ishiyama, 1975, p. 344–383).

Defining and analyzing the costs and benefits of currency integration is not a difficult task. It is, however, problematic to present them in a tangible form which allows for them to be compared. Moreover, certain effects of currency integration can only be observed after the process of integration is complete, which hinders *ex ante* assessment. Therefore, the analysis of costs and benefits requires high cognitive skills, knowledge of the economic environment, thorough empirical research and objectivity not to make overly optimistic or pessimistic assumptions.

### 3. East Caribbean Currency Union Versus Classical Theory of OCA

The establishment of the East Caribbean Currency Union (ECCU) in 1983 was a logical consequence of hundreds of years of monetary, as well as economic and political, integration in the region (Rouse, 1992, p. 63). The East Caribbean dollar (XCD) is a direct successor to the common currency which was the British West India dollar, and the Organisation of East Caribbean States, including ECCU, which is part of it, is to an extent the heir to the West Indies Federation, which in 1958 united the Caribbean islands in their common quest for independence and which was theoretically supposed to unite them into a single country. At present, ECCU consists of 8 members, including 6 independent countries and 2 dependent territories. These are: Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, and Anguilla and Montserrat, which constitute overseas territories of Great Britain. In 2016, ECCU was populated by almost 643 thousand people, comparable to the number of inhabitants in European Montenegro. The collective area of all the member countries and territories is 3006 km<sup>2</sup>, a little less than Northern Cyprus. In 2016, the GDP of the Union was 16 959.19 mn XCD, i.e. 6 281.18 mn USD (ECCB [online], 2018), which is approximately the same as the GDP of Kosovo. The ECCU economies are very open, in some cases the sum of import and export exceeds 100% GDP (World Bank [online], 2017). A significant element of these countries and territories' GDP are tourist and financial services. The small size and economic potential of the member countries and territories allows for posing a thesis that none of them independently constitute an optimum currency area (Zawiślińska, 2008, pp. 208–209). Maintaining separate monetary units would be unjustified from the economic, but also political standpoint, as all the ECCU members are closely related in historical and political terms and have a long history of maintaining a common currency – the main legal tender in 19th c. Caribbean was the Spanish dollar (a global currency, used in numerous places around the world at the time). The first attempt to introduce the pound sterling as the official currency in the British colonies was made as early as 1825 (Woodcock, 2009, pp. 104–105). A thesis can also be posed that when ECCU was being established, little attention was paid to the OCA theory, which was only emerging at the time (Zawiślińska, 2008, p. 209). Below, an attempt was made at analysing the present extent to which the OCA criteria are met by ECCU, in order to evaluate the process of currency integration in the region.

According to the classical theory by R.A. Mundell, the basic criterion to determine if a particular area constitutes an OCA is the internal mobility of the workforce (Mundell, 1961, pp. 657–665). The East Caribbean Currency Union does presently fulfil this condition, due to the membership of all the countries and territories using the East Caribbean dollar in the OECS,

which guarantees a free flow of workers between the member states, on a similar basis as in the European Union. However, the fixed exchange rate of XCD to USD (1 USD = 2.7 XCD) stands in contrast to R.A. Mundell's theory, as he believed that floating exchange rates should be applied to currencies from outside the currency union (Mundell, 1961, pp. 657–665).

According to R.I. McKinnon's theory, the common currency is most advantageous for small and open economies (McKinnon, 1963, pp. 717–725), which the East Caribbean islands undoubtedly are. The fixed exchange rate of the East Caribbean dollar to the American dollar is in agreement with R.I. McKinnon's postulates, according to whom such a solution allows for achieving greater stability and increases the trustworthiness of the currency, which is overall extremely important for the currency's meaning in world economy.

The East Caribbean Currency Union is not, however, an OCA in P.B. Kenen's understanding, whose basic OCA criterion is a diversified structure of production and export, which is supposed to guarantee greater stability and decreased vulnerability to shocks (Kenen, 1969, pp. 41–60). The economies of the ECCU members are similar, as all of them rely on tourism and agricultural crops exports, especially citrus fruit and bananas, as well as financial services, due to which the structure of the economy of the Union cannot be described as diversified.

Furthermore, ECCU does not meet other criteria of the classical OCA theory listed by the theoreticians, for instance the fiscal integration criterion (D.A. Snider), financial market integration (J.C. Ingram), although actions are currently being taken in order to deepen this aspect of integration, e.g. by the Eastern Caribbean Central Bank, or the convergent inflation rates (G. Von Haberler and M.J. Fleming). The case of the ECCU contradicts the theory by O. Issing as well, according to which currency integration is supposed to result from economic integration (Issing, 2001), as the currency union in the region was formed before the economic union and aimed at, among others, facilitating other aspects of integration, including the political and economic ones. The agreement on currency union was therefore achieved mainly due to common history and very similar, i.e. small and open, economies, as well as due to the willingness to tighten the economic and political co-operation between them.

#### **4. The Benefits and Costs for the Members of the East Caribbean Currency Union**

The assessment of the functioning of the East Caribbean Currency Union is not an easy undertaking, as the member countries and territories have, *de facto*, never had separate currencies, due to which there is no data which could illustrate the functioning of an alternative monetary system in the region, before currency integration took place. One can however compare and contrast the processes observed in the ECCU against the currency integration theory or against observations of the functioning of other monetary unions, especially the eurozone.

Following the formation of ECCU, i.e. mid-1980s, significant improvement of the economic situation was noted, expressing itself through the growing GDP, on average 2 pp per annum (Zawiślińska, 2008, p. 216). In the 1990s, the ECCU countries reached the price stability. As an example, in 1995 the CPI index amounted to 3.5%, and four years later only 2.3%. In the 21<sup>st</sup> century, inflation has hardly ever exceeded 3–4%, except 2008, when it was higher in the entire Union (ECCB [online], 2016). One can therefore conclude that without a stable common currency, bound by a fixed exchange rate to a much stronger American dollar, such economic and price stability in the region would have been impossible to achieve.

The economies of the ECCU members are classified as open – as mentioned before, in some cases the sum of export and import exceeds 100% of the GDP (World Bank [online], 2017). In this situation, having a currency bound to the American dollar by a fixed exchange rate is undoubtedly favourable, as it guarantees a greater stability of prices and increased trust of foreign partners. The same is true for foreign investments. A stable currency ensures the safety of investors. In this context, the relation to the American dollar is more significant than the currency union itself, as the ECCU countries are trade partners to each other only to a very small extent. Nevertheless, any trade exchange, as well as mutual investments, are easier within ECCU and their costs are lower (Zawiślińska, 2008, pp. 211–212).

An indubitable advantage of the membership in the Union for the East Caribbean countries and territories is the access to the financial aid from the Eastern Caribbean Central Bank and other institutions in case of financial difficulties resulting from unpredictable causes. This is particularly important in the context of natural disasters, which are relatively common in the region. The hurricanes which regularly ravage the islands hinder the economic growth and make the aid indispensable when it comes to alleviating the losses.

The ECCU economies are largely dependent on the development of tourism. In this context, the fixed exchange rate of the currency to the American dollar is not the only helpful factor, giving the tourists the security of stable prices and in the periods of its weakening, draws in travellers from Europe and Canada (Zawiślińska, 2008, p. 220). The common currency in the countries and territories facilitates moving around the region and gives tourists an opportunity to lower the costs of travel. In 2015, a new record of the number of visitors in ECCU was beaten, as for the first time in history their number exceeded 4 mn (ECCB [online], 2016b). Part of this record can surely be attributed to the Eastern Caribbean dollar.

A significant advantage of the existence of the Eastern Caribbean Currency Union is its influence on other signs of integration in the region. Its establishment was an important impulse to further deepening of the economic and political integration, both within the ECCU and the OECS. At present, the countries and territories in the Union are deeply integrated as regards i.a. the judiciary, education, healthcare and security (OECS [online], 2017). Free movement of people and capital, which is one of the greatest achievements of the OECS, would have certainly been more difficult to achieve without prior currency integration.

On the other hand, the critics of the idea of common currency frequently argue the loss of an important national symbol – the currency. It is difficult to assume that the currency of any of the ECCU countries could be internationally recognisable worldwide, and as none of the countries in question has ever had its own, separate legal tender, the loss of a national symbol is not applicable in this case. It is possible that separate currencies would be more unstable and have a weaker international position than the Eastern Caribbean dollar. Potential disadvantages of the currency union often include the loss of income from seignorage, however in the case of countries and territories of such a small economic potential as that of the ECCU countries, it can be assumed that the income in question would be very slight. The currency union countries certainly do not enjoy independence in the area of monetary policy, which may result in a disturbance of internal equilibrium (Zawiślińska, 2008, p. 77). However, in the case of ECCU, all member states have similar economies and often face identical or similar problems, which is why one can assume that in most cases, their monetary policies would be similar nonetheless.

Fixing the exchange rate to the American dollar, which as shown above is frequently favourable to the ECCU members, may also become a disadvantage. A high exchange rate of the USD to other currencies makes the ECCU countries and territories less competitive to

tourists from outside the USA, who constitute a large share of the visitors. It also causes the goods exported from the Union to be more expensive to importers.

## 5. Conclusion

One can argue that currency integration of the East Caribbean can be counted as successful, despite the fact that the ECCU countries do not meet some of the criteria of the classical OCA theory. The success of the Union proves that those criteria are not always the most important factor determining the success of currency integration, although it is certainly difficult to assess how the ECCU countries and territories would function if they used separate legal tenders. It is enough to say, then, that certain criteria met by the ECCU countries, together with common history, geographical proximity and similar economies are enough to create an OCA, understood as an area where the introduction of common currency brings more benefits than losses.

The common currency constitutes an incentive and facilitates mutual investments and trade, which is significant taking into account the geographical isolation of the ECCU islands. Maintaining separate legal tenders would be economically or politically unjustified, due to the very small size of their economies. Such currencies would be deprived of importance in global markets and would hinder trade relations, as well as tourist and financial services.

Apart from the financial crisis of 2008 and, in particular countries, the aftermath of natural disasters, the ECCU economies exhibit relative stability and growth tendencies from the time of the ECCU's very establishment, which – taking into account the frequency of natural disasters, which mainly affect agriculture and tourism, which constitute the main source of income on the islands – should be considered a success. It can also be assumed that it is, among others, an outcome of currency integration, as well as fixing the exchange rate of the Eastern Caribbean dollar to the American dollar, which ensures greater stability of the countries and, in effect, draws in investors and tourists. The political situation in the region, i.e. the absence of conflicts between the Eastern Caribbean countries and territories, can also be ascribed to their participation in the currency union.

Deepening integration within the ECCU is to be expected in the future, however the accession of new members to the currency union is unlikely. From the geographical point of view, the most logical candidates would be Martinique and Guadelupe, located between the island which use the Eastern Caribbean dollar. They do, however, belong to France, and as a result to the eurozone, which renders their ECCU membership impossible for the time being.

## References

- [1] Braithwaite, S. (2017). What Do Demand and Supply Shocks Say About Caribbean Monetary Integration?, *World Economy*, vol. 40, iss. 5, pp. 949–962.
- [2] Corden, W.M. (1972). *Essays in International Finance. Monetary Integration.*, Princeton: Princeton University Press [online]. [cit.2018-01-24]. Available at: [https://www.princeton.edu/~ies/IES\\_Essays/E93.pdf](https://www.princeton.edu/~ies/IES_Essays/E93.pdf)., 1–41.
- [3] ECCB (2016). *Consumer Price Index (CPI) – December 2016* [online]. [cit.2018-01-22]. Available at: [http://www.eccb-centralbank.org/Statistics/Data%20Files/CPI\\_Annual\\_December\\_2016.XLSX](http://www.eccb-centralbank.org/Statistics/Data%20Files/CPI_Annual_December_2016.XLSX).

- [4] ECCB (2016b). *Annual Tourism Data – December 2016* [online]. [cit. 2018-01-22]. Available at: [http://www.eccb-centralbank.org/Statistics/Data%20Files/Tourism\\_Annual\\_December\\_2016.XLSX](http://www.eccb-centralbank.org/Statistics/Data%20Files/Tourism_Annual_December_2016.XLSX).
- [5] ECCB (2018). *Gross Domestic Product (GDP) Estimates and Projections – 1977 to 2018*[online]. [cit.2018-01-22]. Available at: [http://www.eccb-centralbank.org/Statistics/Data%20Files/GDP%20Data\\_1977%20to%202018.XLS](http://www.eccb-centralbank.org/Statistics/Data%20Files/GDP%20Data_1977%20to%202018.XLS).
- [6] Fleming, M.J. (1971). On Exchange Rate Unification, *The Economic Journal*, vol. 81, no 323, pp. 467–488.
- [7] Grubel, H.G. (1970). The Theory of Optimum Currency Areas, *The Canadian Journal of Economics*, vol. 3, no 2, pp. 318–324.
- [8] Gyoerk, E. (2017). Economic Costs and Benefits of EMU Membership from the Perspective of a Non-member, *Open Economies Review*, vol. 28, iss. 5, SI, pp. 893–921.
- [9] Hallett, A.H. and Jensen, S.E.H. (2016). The Fiscal Framework in a Currency Union: Lessons from a Comparison between the Euro Area and the Eastern Caribbean Currency Union, *World Economy*, vol. 39, iss. 6, pp. 803–823.
- [10]Heller, H.R. (1974). *International Monetary Economics*, New Jersey: Prentice-Hall.
- [11]Ingram, J.C. (1969). Comment – The Currency Area Problem. In Mundell, R.A. and Swoboda A.K. (eds.). *Monetary Problems of the International Economy*. Chicago: University of Chicago Press, pp. 95–100.
- [12]Ishiyama, Y. (1975). The Theory of Optimum Currency Areas: A Survey, *International Monetary Fund (IMF) Staff Papers*, vol. 22, no 2, pp. 344–383.
- [13]Issing, O. (2001). Economic and Monetary Union in Europe: political priority versus economic integration?, In *Conference 2001 of European Society for the History of Economic Thought*,[online]. [cit.2018-01-22]. Available at: <https://www.ecb.europa.eu/press/key/date/2001/html/sp010223.en.html>.
- [14]Kenen, P.B. (1969). The Theory of Optimum Currency Areas: An Eclectic View. In Mundell, R.A. and Swoboda, A.K. (eds.). *Monetary Problems of the International Economy*. Chicago: University of Chicago Press, pp.41–60.
- [15]Krasiuk, J. (2013). Kryzys finansowy strefy euro, *Optimum Studia Ekonomiczne No 4(64)*, pp. 125–132.
- [16]Krugman, P. (2013). Revenge of the Optimum Currency Area. In Acemoglu, D., Parker, J. and Woodford, M. (eds.). *NBER Macroeconomics Annual 2012*, Chicago: University of Chicago Press, vol. 27, pp. 439–448
- [17]Lachowicz, M. (2008). Koncepcja wspólnych obszarów walutowych, *Bank i Kredyt*, vol. 39, no 2, pp. 3–27.
- [18]Ładyka, S.(2001). *Z teorii integracji gospodarczej*. Warszawa: O.W. SGH.
- [19]McKinnon, R.I. (1963). Optimum Currency Areas, *The American Economic Review* vol. 53, no 4, pp. 717–725.
- [20]Mounsey, A. and Polius, D.T. (2015). Is It Time to Revisit the Savings Rate Floor in the ECCU?, *Economic Affairs*, vol. 35, iss. 1, pp. 75–92.



- [21] Mundell, R.A. (1961). A Theory of Optimum Currency Areas, *The American Economic Review*, vol. 51, no 4, pp. 657–665.
- [22] Rouse, I. (1992). *The Tainos: Rise and Decline of the People who Greeted Columbus*, New Haven: Yale University Press.
- [23] Snider, D.A. (1967). *Optimum Adjustment Processes and Currency Areas*, Princeton: Princeton University Press.
- [24] Urban, D. and Baranowski, P. (2003). Geneza i rozwój teorii optymalnego obszaru walutowego, *Zeszyty Naukowe Ostrolęckiego Towarzystwa Naukowego*, no 17, pp. 54–68.
- [25] Wood, G.E. (1973). European Monetary Union and the U.K. – A Cost Benefit Analysis. *Surrey Papers in Economics No 9*. Stanford: Stanford University, pp. 1–23.
- [26] Woodcock, R. (2009). *Globalization from Genesis to Geneva: A Confluence of Humanity*, Victoria: Trafford Publishing.
- [27] World Bank (2017). *World Development Indicators & Global Development Finance* [online]. [cit.2018-01-22]. Available at: <http://databank.worldbank.org/data/>.
- [28] Zawiślińska, I. (2008). *Optymalny obszar walutowy. Teoria i praktyka na kontynencie amerykańskim*, Warszawa: O.W. SGH.
- [29] OECS (2017). *OECS Strategic Objectives* [online]. [cit.2018-01-22]. Available at: <http://www.oecs.org/homepage/strategic-objectives>.

## Indirect R&D Support as a Tool for Enhancing Innovations: the Case of the Czech Republic and the Netherlands

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### **Abstract**

*The main advantage of the indirect support for research and development is that this type of support is not selective and each company that meets the legal requirements can use it for financing of its research and innovation activities. Thus, this support is more compatible with economic competition. It also represents one of the means to reach the Europe 2020 target in the field of research and development and most of the EU countries use it. This paper deals with indirect support for R&D that is used for promotion of innovation activities in the Czech Republic and the Netherlands. The aims of the article are to compare indirect R&D support in both countries, to provide new empirical evidence on using this type of support, and to find some inspiration for the Czech Republic from the Dutch example. It has been observed that this instrument is used in different ways in both analysed countries. The Netherlands has more experience with tax incentives and the impact of the support is regularly evaluated.*

**Keywords:** Czech Republic, European research policy, indirect R&D support, Netherlands, tax incentives

**JEL Classification:** H25, O38, R12

### **1. Introduction**

Innovations are generally perceived as a decisive factor for competitiveness of enterprises and for socio-economic development of regions and countries. They represent a way to achieve economic growth, productivity increase, new jobs and wealth creation. Research and development (R&D) is one of the most important sources for innovations, particularly the radical ones, because it brings new knowledge that are vital for revolutionary innovations with high value added (Žitek, 2014; Halásková et al., 2016). The importance of innovations for economic and social development was also confirmed by the Europe 2020 Strategy (European Commission, 2010) and an increase in expenditures on R&D is the main way to improve the innovation performance and competitiveness of the European economies. The EU2020 target is to invest 3% of GDP in research and development in 2020 and member states determine their own targets. The most innovative countries invest more than 3 per cent of GDP in R&D now and a significant part of it is financed by enterprises. The role of public support is to boost private expenditures on R&D and the countries that are the innovation leaders put a strong emphasis on innovation and research policy (Gál, 2014; Mynarzová and Štverková, 2015).

In the scientific literature, public interventions are justified by the neoclassical argument about market failures (Arrow, 1962) and the institutionalist argument about systemic failures (Woolthuis et al., 2005). The market failures and imperfections discourage companies from

investing in R&D (Bronzini and Piselli, 2016). Results of R&D have a character of a public good, because knowledge is regarded as non-rival and non-excludable goods (Arrow, 1962). New knowledge cannot be fully appropriated and due to knowledge spillovers (Fischer et al., 2009) the firm's rivals may be able to free-ride on its investment (Aerts and Schmidt, 2008). It decreases private rate of returns of R&D for the company that invested in R&D. On the other hand, creation and diffusion of new knowledge is vital for the development of society. The decrease in private investment means that the level of R&D expenditures is below the socially desirable optimum (Brown et al., 2017). The systemic failures are discussed in the concept of innovation systems and they are comprised of infrastructural, institutional, interaction and capabilities failures (Woolthuis et al., 2005).

Research projects in businesses can be supported in a direct or an indirect way. The direct way is usually based on providing subsidies to companies in tenders. The less frequent way is providing favourable bank loans or guarantees. The indirect support for R&D usually lies in some type of tax incentive (see table 1). This paper deals with the indirect support of R&D in the Czech Republic and the Netherlands. The Dutch Promotion of Research and Development Act (WBSO) was introduced in 1994, with the aim to stimulate research and development growth. The argument behind WBSO was the classical market-failure discussion, as well as the concern about the high labour costs in the Netherlands that had a negative impact on the business environment (Verhoeven et al., 2012 in CPB et al., 2014a). In the Czech Republic, indirect support of R&D has been provided since 2005 in the form of expenses as deductible items from the tax base of income tax.

The aims of this article are to compare indirect R&D support in both countries, to provide new empirical evidence on using this type of support, and to find some inspiration for the Czech Republic from the Dutch example. Empirical data for our research come from European Commission, OECD, Eurostat and Czech and Dutch administrative resources. The comparison of both countries is carried out with respect to the setting of the tax incentive system, extent of use of the indirect support by enterprises, and the evaluation of public intervention impacts.

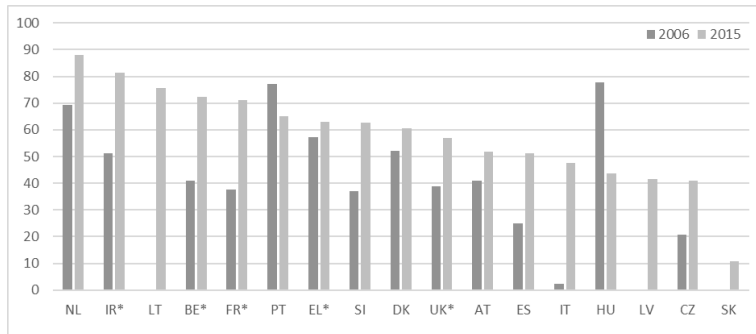
## **2. Tax Incentives for Research and Development**

The indirect support for R&D has some advantages as well as disadvantages in comparison with the direct support. Czarnitzki et al. (2011) recommended providing the indirect support rather than the direct type. They pointed out the government failure that is usually connected with direct support. In the case of indirect support, this risk is minimized. They also stressed that indirect support is considered to be a neutral form of encouragement to R&D as all companies, irrespective of the industry, size and innovation activity, can claim it. Tax incentives are market-based and thus they are considered more neutral than direct support. On the other hand, it means that the government cannot influence the structure of research and choice of R&D projects (Elschner et al., 2011). We think that this is true only to some extent. Some countries have more favourable conditions for specific groups of enterprises, e.g. for small and medium-sized enterprises, or specific industries, e.g. energy (see CPB et al., 2014b; OECD, 2018). Some authors argue that private companies use indirect support to implement projects with high private returns inducing investments with a short-term horizon that would have been implemented in any case, i.e., without public aid (Crespi et al., 2016).

Berube and Mohnen (2009) argued that companies should combine both types of support. They found out that companies using both instruments introduce more new products than their counterparts that only receive the indirect support. Busom et al. (2014) connected the type of public support with the character of companies. They stated that direct and indirect funding are not perfect substitutes with respect to their ability to reach firms facing barriers associated

to market failures. Subsidies may be better suited than tax reliefs to encourage companies to start doing R&D, which is valid especially for young knowledge-based companies. Brown et al. (2017) tested the relation between indirect support and the character of industry. They argue that private R&D investment is below the socially optimal level, particularly in high-tech industries, and that the indirect support is more effective in promoting low-tech R&D, but it is not sufficient for promoting high-tech R&D. Figure 1 shows a proportion between indirect and direct support for R&D. The higher share of indirect support can be observed in the Netherlands. The Czech Republic can be found on the opposite side of the ranking.

**Figure 1: Tax Incentive Share of Public Aid for R&D in Selected EU Countries (%)**



Note: \* data for 2006 and 2014

Source: OECD (2017b)

**Table 1: Typology of R&D Tax Incentives in EU Countries**

Tax credit	Tax allowance	Payroll withholding tax	Social security contribution	Accelerated depreciation of R&D capital
Austria (AT), Belgium (BE), Denmark (DK), France (FR), Hungary (HU), Ireland (IR), Italy (IT), Portugal (PT), Spain (ES), United Kingdom (UK)	Austria (AT), Belgium (BE), Czech Republic (CZ), Greece (EL), Hungary (HU), Latvia (LV), Lithuania (LT), Poland (PL), Romania (RO), Slovakia (SK), Slovenia (SI), United Kingdom (UK)	Belgium (BE), Netherlands (NL), Spain (ES)	France (FR), Hungary (HU), Netherlands (NL), Sweden (SE)	Belgium (BE), Denmark (DK), France (FR), Lithuania (LT), Poland (PL), Romania (RO), Spain (ES), United Kingdom (UK)

Source: authors' own processing based on OECD (2017a)

Experts at the European Commission state that 26 EU countries use some type of R&D tax incentive (CPB et al., 2014b), whereas OECD (2017b) quote only 22 countries. The difference is caused by the fact that the EC also analyses states that use tax incentives for acquisition of intellectual property rights. In our paper, we only deal with tax incentives for research activities. Table 1 provides an overview of various types of R&D tax incentives that are applied in EU countries. The most frequent forms of incentives are tax credits and tax allowances.

### 3. Indirect Support for R&D in the Czech Republic and the Netherlands

As shown in Figure 1, the Netherlands belongs to European leaders in providing indirect public support for R&D activities. This country is also well-known for its high patent activity and quite high expenditures on R&D, although some EU countries such as Sweden, Finland and

Austria invest more. Table 2 compares expenditures on R&D in both analysed countries. It can be surprising that the Czech Republic set out a higher EU2020 target for itself than the Netherlands.

**Table 2: Expenditures on Research and Development**

	GERD (share in GDP, %)			BERD (share in GERD, %)		BERD (share in GDP, %)		BERD (PPS per inhabitant)	
	2010	2015	EU2020 target	2009	2015	2010	2015	2010	2015
<b>CZ</b>	1.34	1.93	2.7	39.8	34.5	0.77	1.05	163	267
<b>NL</b>	1.72	2.00	2.5	45.1	48.6	0.83	1.12	282	420

Source: authors' own processing and calculation based on Eurostat (2017)

In the Czech Republic, enterprises can deduct the expenditures on R&D from the tax base and in reality, these expenses are deducted twice (KDP, 2017). They are first deducted within the tax base calculation and for the second time they are deducted from the calculated tax base. Tax rate for corporate income tax is 19%; therefore, the taxpayer can save up to 19% of the R&D costs. If the tax base does not cover all expenses, they can be deducted within the three following years (so called carry forward). Companies have to elaborate their research project in a written form and submit it together with their tax return to the Tax Office. Enterprises can ask the relevant Tax Office in advance for a binding assessment whether the project expenses are really tax deductible. The research project has to identify some element of novelty and to resolve some technology uncertainty. The second condition for using this type of support is that the same research project cannot be subsidized by any type of direct public aid. The innovative company has to decide whether it prefers a direct or an indirect form of support.

Since 1994, the Dutch government has offered the opportunity for companies that perform R&D-activities to decrease their R&D costs through the fiscal scheme 'Wet Bevordering Speur- en Ontwikkelingswerk' (WBSO). This scheme is implemented by the Netherlands Enterprise Agency (CPB et al., 2014b). The WBSO scheme is designed for Dutch companies as well as self-employed entrepreneurs. Companies performing R&D activities may benefit from a 32% tax credit (40% for start-ups) of the first €350,000 in R&D wage costs and other expenses and investments, and 16% for those costs and investments exceeding €350,000. Self-employed persons are entitled to a fixed tax deduction of €12,522 (and additional €6,264 for start-up self-employed persons). The R&D project has to meet the following conditions before the company can apply for the tax incentive: the proposed R&D activities take place in their own company, the technological development is new to the organisation, the development is accompanied by technical problems, the R&D work has yet to take place (companies have to submit a WBSO application in advance) (RVO, 2017b). Firms are automatically guided through the process of application by the Agency, which administers the scheme. Application is carried online and the decision is made within three months. (CPB et al., 2014b)

Comparing both systems we can find several differences (details in table 3). The Czech Republic uses tax incentives in the form of extra-deductions from the taxable base that exceed the really invested expenditures. This way can be called a reduction of taxable base. Dutch companies use a special form of tax incentive, which lies in reduction of costs for personnel. It means that companies are able to either employ more researchers or to compete successfully for researchers by offering higher net salaries. (Elschner et al., 2011) Furthermore, special incentives are provided to self-employed persons. The differences can also be found in the type of deductible expenses (table 4) and they are related to contracted research and long-term assets (expenses for acquisition vs. depreciation).

**Table 3: Comparison of R&D Tax Incentive Schemes**

	Czech Republic	Netherlands
Type of scheme	R&D tax allowance	Payroll withholding tax credit for R&D wages / social security contribution
Deducted from	Taxable income	R&D wage cost and non-R&D wage related costs and expenses attributable to R&D
Vol-based rate	100%	32% for eligible R&D costs up to EUR 350 thous., 16% above EUR 350 thous.
Incremental rate	10%	-
Ceiling on amounts that can be claimed	no	yes
Carry forward	3 years	-
Deductible R&D expenses	wages and salaries, R&D services (contracted research), consumables, depreciation	wages and salaries, consumables, M&E (acquisition of plant, machinery or equipment for R&D ), land and buildings (acquisition)

Source: OECD (2017a)

Tables 5 and 6 show the extent to which the indirect support is used by enterprises. However, it is quite difficult to find some statistical data that would be mutually comparable. In this respect, the Czech Republic publishes more data than the Netherlands. When looking at number of companies (table 5), we can state that R&D tax incentives are more popular in the Netherlands. The increase in their number between 2007 and 2015 is higher in the Czech Republic, but this can be explained by the Czech shorter history.

**Table 5: Number of Companies Using R&D Tax Incentives**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	Increase
<b>Number of companies</b>										
<b>CZ</b>	574	598	634	716	859	1021	1120	1264	1306	228%
<b>NL</b>	13 000	13 450	16 620	19 450	20 530	22 220	22 640	22 970	22 980	177%
<b>Number of companies per million inhabitants</b>										
<b>CZ</b>	56	58	61	68	82	97	107	120	124	-
<b>NL</b>	795	820	1 008	1 173	1 233	1 328	1 349	1 365	1 360	-

Source: authors' own calculation based on CSO (2017), Eurostat (2017) and RVO (2017a)

Table 6 shows the amount of expenses and the amount of indirect support. When we calculate the volume of tax incentives in USD purchasing power standard (PPS) per inhabitant, we can observe that the support in the Netherlands is about 4 times higher than in the Czech Republic.

**Table 6: Indirect Government Support Through R&D Tax Incentives in 2015**

	Deductible expenses (mil. EUR)	Deductible expenses (EUR per inhabitant)	Volume of R&D tax incentives (mil. USD PPS)	Volume of R&D tax incentives (USD PPS per inhabitant)	Tax incentives (as a % of GDP)
<b>CZ</b>	492	47	198	19	0.06
<b>NL</b>	3,870	229	1,265	75	0.15

Source: authors' own processing and calculation based on CSO (2017), Eurostat (2017), OECD (2017b) and RVO (2017a)

For the sake of completeness, we would like to emphasize that the impact of the Dutch tax incentives is regularly evaluated by the government, which is not carried out in the Czech Republic. We can also find several research studies that deal with the Dutch system. The official WBSO evaluations were carried out in 2002, 2007, and 2012. In general, these evaluations found out large and significant benefits of the WBSO, indicating that one euro

spent as foregone tax revenue results in around one euro of additional R&D (CPB et al., 2014). The WBSO has also been proven to be effective in creating absorptive capacity and additional R&D expenditures, especially among SMEs (Brouwer et al., 2002; Poot et al., 2003). The study by Cornet and Vroomen (2005) outlined that the WBSO provides large positive benefits for start-ups. Lokshin and Mohnen (2007) concluded their research by outlining that the program of R&D incentives in the Netherlands has been effective in reducing the user cost of R&D and therefore has been successful in stimulating firm R&D capital formation. In terms of the effect on R&D wages, Lokshin and Mohnen (2008) found out that elasticity between the effective rate of the Dutch payroll tax withholding R&D tax credit and average R&D wage is 0.2 in the long run. Lokshin and Mohnen (2012) defined that, on average, ten percent decrease in the user-cost of R&D capital induced by the tax credit leads to four percent more R&D capital in the short run and six percent more in the long run.

#### 4. Conclusion

The Dutch system of indirect R&D support has much longer history than the Czech system. Whereas it has been running since 1994, the Czech system has been provided since 2005. Both systems differ in their basic elements, because the Czech system has a form of reduction of the taxable base while the Dutch system focuses on the reduction of the costs for personnel. The Dutch tax incentives are also available for self-employed persons that carry out R&D activities. It is the same for the Czech Republic, however, in this case the self-employed persons do not use that opportunity very often. There is also a practice by the Dutch system of targeting young start-ups by offering them a preferential rate, which could be inspiring for the Czech Republic.

In the Netherlands, it is very usual and customary to use indirect tax support in contrast to the direct support. This is mostly because of the historical development of the support system, the cultural differences, the mentality of entrepreneurs and the character of the business environment. The Czech Republic lags behind the Netherlands in this case. This is partly influenced by the fact that the Czech Republic is eligible for higher support from the Structural Funds through the Operational Program Enterprise and Innovation (2007–2013) and the Operational Program Enterprise and Innovation for Competitiveness (2014–2020).

The statistical data concerning the indirect support are well managed and regularly published by the Czech Statistical Office. The Dutch system does not have the same qualities in these terms and Statistics Netherlands does not publish relevant data regularly. On the other hand, the official evaluation of the scheme is missing in the Czech Republic. The Czech Republic can learn from the Dutch experience of evaluation practices that reinforces better policy making and policy effectiveness.

The WBSO system is governed by Netherlands Enterprise Agency that aims to help the entrepreneurs with administration and guides them through the process with available consultations. In the Czech Republic, the assessment of the application is in the competence of the Tax Office and the application is submitted together with the tax return. Hence, Czech entrepreneurs see the rules for the tax reduction unclear, fear sanctions, and therefore are less willing to use the support. These good Dutch administrative practices can be adopted in the Czech Republic by offering guidance through the process and by making the system more transparent to give businesses greater legal certainty.

## References

- [1] Aerts, K. and Schmidt, T. (2008). Two for the price of one? Additionality effects of R&D subsidies: A comparison between Flanders and Germany. *Research Policy*, vol. 37, iss. 5, pp. 806-822.
- [2] Arrow, K. J. (1962). Economic welfare and the allocations of resources of invention. In *The Rate and Direction of Inventive Activity: Economic and Social Factors*. Princeton: Princeton University Press, pp. 609-626.
- [3] Berube, C. and Mohnen, P. (2009). Are Firms That Receive R&D Subsidies More Innovative? *Canadian Journal of Economics*, vol. 42, iss. 1, pp. 206-225.
- [4] Bronzini, R., Piselli, P. (2016). The impact of R&D subsidies on firm innovation. *Research Policy*, vol. 45, iss. 2, pp. 442-457.
- [5] Brouwer, E., den Hertog, P., Poot, A.P. and Segers, J. (2002). *WBSO nader beschouwd. Onderzoek naar de effectiviteit van de WBSO*. Amsterdam: Ministerie van Economische Zaken.
- [6] Brown, J. R., Martinsson, G. and Petersen, B. C. (2017). What promotes R&D? Comparative evidence from around the world. *Research Policy*, vol. 46, iss. 2, pp. 447-462.
- [7] Busom, I., Corchuelo, B. and Martinez-Ros, E. (2014). Tax Incentives ... or Subsidies for Business R&D? *Small Business Economics*, vol. 43, iss. 3, pp. 571-596.
- [8] Cornet, M., Vroomen, B. (2005). *Hoe effectief is extra fiscale stimulering van speuren ontwikkelingswerk? Effectmeting op basis van de natuurlijke experimentmethode*. Hague: CPB.
- [9] CPB et al. (2014a). *A Study on R&D Tax Incentives Annex: Good practice cases. Final report* [online]. [2018-02-08]. Available at: [https://ec.europa.eu/taxation\\_customs/sites/taxation/files/resources/documents/taxation/gen\\_info/economic\\_analysis/tax\\_papers/good\\_practice\\_cases.pdf](https://ec.europa.eu/taxation_customs/sites/taxation/files/resources/documents/taxation/gen_info/economic_analysis/tax_papers/good_practice_cases.pdf)
- [10] CPB et al. (2014b). *A Study on R&D Tax Incentives. Final Report. Working Paper No. 52*. Luxembourg: Taxation papers.
- [11] Crespi, G., Giuliodori, D., Giuliodori, R., and Rodriguez, A. (2016). The effectiveness of tax incentives for R&D+i in developing countries: The case of Argentina. *Research Policy*, vol. 45, iss. 10, pp. 2023-2035.
- [12] CSO. (2017). *Nepřímá veřejná podpora výzkumu a vývoje v České republice 2015*. [online]. [cit.2018-02-08]. Available at: <https://www.czso.cz/csu/czso/neprima-verejna-podpora-vyzkumu-a-vyvoje-v-ceske-republice>.
- [13] Czarnitzki, D., Hanel, P., and Rosa, J. M. (2011). Evaluating the impact of R&D tax credits on innovation: A microeconomic study on Canadian firms. *Research Policy*, vol. 40, iss. 2, pp. 217-229.
- [14] Elschner, C., Ernst, C., Licht, G., and Spengel, C. (2011). What the design of an R&D tax incentive tells about its effectiveness: a simulation of R&D tax incentives in the European Union. *Journal of Technology Transfer*, vol. 36, no. 3, pp. 233-256.
- [15] European Commission (2010). *Europe 2020. A strategy for smart, sustainable and inclusive growth*.



- [16] Eurostat (2017). Database. [online]. [cit.2018-02-08]. Available at: <http://ec.europa.eu/eurostat/data/database>.
- [17] Fischer, M. M., Scherngell, T. and Jansenberger, E. (2009). Geographic localisation of knowledge spillovers: evidence from high-tech patent citations in Europe. *Annals of Regional Science*, vol. 43, iss. 4, pp. 839-858.
- [18] Gál, Z. (2014). Policy aspects of innovation governance. Central and regional governance of innovation in Hungary. *Társadalomkutatás*, vol. 32, iss. 3, pp. 295-304.
- [19] Halásková, M., Slovák, S., R. Halásková, R. (2016). Impact of Selected R&D Indicators on Competitiveness of the European Union Countries. In *International Conference on European Integration 2016*. Ostrava: VŠB-TUO, pp. 309-318.
- [20] KDP Komora daňových poradců ČR (2017). Výzkum a vývoj v kontextu odčitatelné položky [online]. [cit.2018-02-08]. Available at: <http://www.vyzkum-vyvoj.cz>.
- [21] Lokshin, B. and Mohnen, M. (2012). How effective are level-based R&D tax credits? Evidence from the Netherlands. *Applied Economics*, vol. 44, iss. 12, pp. 1527-1538.
- [22] Lokshin, B. and Mohnen, P. (2007). Measuring the effectiveness of R&D tax credits in the Netherlands. *Working Paper No. 25*, Maastricht: UNU-MERIT WPS.
- [23] Lokshin, B. and Mohnen, P. (2008). Wage Effects of R&D Tax Incentives: Evidence from the Netherlands. *Working Paper No. 34*, Maastricht: UNU-MERIT WPS.
- [24] Mynarzová, M. and Štverková, H. (2015). Public Support as an Important Factor for Competitiveness of SMEs in the European Union. In *Conference on Current Problems of the Corporate Sector*. Bratislava: EUBA, pp. 452-461.
- [25] OECD (2017a). *Compendium of R&D Tax Incentive Schemes: OECD Countries and Selected Economies, 2017* [online]. [cit.2018-02-08]. Available at: <http://oe.cd/rntax>.
- [26] OECD (2017b). *Measuring tax support for R&D and innovation* [online]. [cit.2018-02-08]. Available at: <http://www.oecd.org/science/rd-tax-stats.htm>.
- [27] OECD (2018). *Tax incentives for R&D and innovation* [online]. [cit.2018-02-08]. Available at: <https://www.oecd.org/sti/>.
- [28] Poot, T., den Hertog, P. Grosfeld, T., Brouwer, E. (2003). *Evaluation of a major Dutch Tax Credit Scheme (WBSO) aimed at promoting R&D* [online]. [cit.2018-02-08]. Available at: <ftp.zew.de/pub/zew-docs/evaluationR%26D/EBrouwer.pdf>.
- [29] RVO Netherlands Entreprise Agency (2017b). *Manual WBSO 2017*. Zwolle: RVO.
- [30] RVO Rijksdienst voor Ondernemend Nederland (2017a). Focus op speur en ontwikkelingswerk: de WBSO in 2016. [online]. [cit.2018-02-08]. Available at: <https://www.rvo.nl/file/focus-op-speur-en-ontwikkelingswerk-de-wbso-2016>.
- [31] Verhoeven W.H.J. , van Stel, A. J. and Timmermans, N.G.L. (2012). *Evaluatie WBSO 2006-2010. Effecten, doelgroepbereik en uitvoering*. Zootemer: Panteia, EIM.
- [32] Woolthuis, R. K., Lankhuizen, M., Gilsing, V. (2005). A system failure framework for innovation policy design. *Technovation*, vol. 25, iss. 6, pp. 609-619.
- [33] Žitek, V. (2014). Specializace, prostorová koncentrace a diverzifikace v českých a slovenských krajích. In *17<sup>th</sup> International Colloquium on Regional Sciences. Conference Proceedings*. Brno: Masarykova univerzita, pp. 326-331.

## Differentiated Integration and Monetary Union in Europe

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### **Abstract :**

*The objective of the paper is to highlight the correlations between the evolving system of differentiation in Europe and the monetary union as the core of the European Union. So far the monetary integration has been one of the most important elements of the “Europe of different speeds”. In the up-coming future it is expected that the fiscal federalism will further evolve and it is going to have serious political externalities and spill-overs. Consequently this paper will focus on the sources, determinants, mechanisms and anticipated outcomes of the multi-speed Europe of tomorrow. The anticipated scenarios span from the prospects of building some (quasi)federal structures, through various concepts of differentiated integration, up to the visions of disintegration. The author stands behind the argument that the most likely outcome of the current crisis and the future evolutionary trajectory of the European Union will lead towards a system of differentiated integration in which there will be place for deeper (federal-type) integration of some member states, disintegration for some others and in-between solutions for the rest.*

**Keywords:** *differentiated integration, disintegration, Europe, fiscal federalism, monetary union*

**JEL Classification:** *E00, E06, F00, F34, F45*

### **1. Introduction**

The existing literature on differentiation and the monetary integration in Europe focuses predominantly on the descriptive models of various forms of differentiated integration in relation to the level and scope of the monetary policy (and related policies) coordination. The concepts used, similarly to the standard ones exploited in the differentiated integration literature, range from the *Europe a la Carte* metaphor, through Europe of different speeds, concentric circles, differentiated geometries, up to the diversified hemispheres of integration (Andersen, Sitter 2006). More and more analysts, experts and academics claim that the observed increase in differentiation came to the limits in which it carries the potential for disintegration. Exemptions from the Eurozone and Schengen area have already been quite prominent examples of differentiation. But undermining one of the four freedoms (free movement of people), which was the case in the (in)famous Brexit referendum, attacks one of the fundamentals and questions the very idea of the European integration project. Openly opposing the very core of the Single Market turns the direction of the integration trajectory. The economic theories of international integration inform us that it is not only the free movement of products and services which constitutes a common market. But for its creation and functioning, it is conditional to liberalize also the free movement the factors of production: the capital and the labor. This is why the four freedoms were treated so far as the inseparable

four elements of one concept. The group of countries that decided to integrate further even widened the circles of integration, expanding the system of differentiation.

Both in academic deliberations and in the real life politics, the differentiated integration concepts offered, so far, a way out from the dichotomous thinking between full membership and full non-membership. Moreover, nowadays they are treated much more as a solution than a problem. Differentiated integration in Europe has reached the very top of the agenda both in the scientific (Duttle 2016) and in the public discourses (Bernstein 2016). Even though it has been present in the European integration project for decades (Deutsch 1957, Dahredorf 1973), never before has it gained so much attention due to its saliency and dynamism (Fossum 2015). The so called Brexit (Hodgson 2016) and the shift in French (Emmanuel Macron) and German (Angela Merkel) attitudes towards the differentiation (namely open permissive, accepting and even welcoming) changed the “ever closer Union” paradigm substantially. Britain’s going out of the EU will widen the circles of integration, at the same time the Franco-German engine is determined to deepen integration, and the two dynamics will most probably result in the new system of differentiation, unknown so far in history of the European integration project. The new evolving situation requires intense scientific investigation that will enhance our knowledge about its determinants and dynamics.

This paper aims at highlighting the correlations between the evolving system of differentiation in Europe and the monetary union as the core of the European Union. So far the monetary integration has been one of the most important elements of the “Europe of different speeds”. In the up-coming future it is expected that the fiscal federalism will further evolve and it is going to have serious political externalities and spill-overs. Consequently this paper focuses on the sources, determinants, mechanisms and anticipated outcomes of the multi-speed Europe of tomorrow. The anticipated scenarios span from the prospects of building some (quasi)federal structures, through various concepts of differentiated integration, up to the visions of disintegration. The author stands behind the argument that the most likely outcome of the current crisis and the future evolutionary trajectory of the European Union will lead towards a system of differentiated integration in which there will be place for deeper (federal-type) integration of some member states, disintegration for some others and in-between solutions for the rest - including the members and non-members of the European Union.

## **2. Problem Formulation and Methodology**

Based on the analysis of the existing literature about the differentiated integration, this contribution sees the 2008+ economic crisis in Europe as a structural problem for the EU. Following the logic of the integration evolution from one crisis to another one, it is possible to interpret the economic crisis and its consequences as an opportunity for EU’s reforms. Its reformist impulse may enhance the European integration in two various possible ways. First, it may help to reform the EU into a more differentiated system which will allow accommodate countries willing to integrate at various speeds and extends. Secondly, once “getting rid” of the major trouble-maker and marauder, that is the United Kingdom (after the Brexit process is concluded with UK leaving the EU structures) as a country opposing the further integration, the EU may accelerate towards the “ever closer union”.

Differentiated integration as a scholarly concept is a relatively new phenomenon in the European studies, or wider: international relations, legal studies, political science or economy (Andersen, Sitter 2006, Mohler, Seitz 2012). It grew together with the real life increase in differentiation (opt-outs, exemptions, enhanced cooperation, constructive abstention, special clauses, additional protocols, etc.). In the last two decades, differentiation has been a dominant feature of European integration (Boerzel 2005). It is argued that approximately half of the EU

policies are implemented in different ways (Lord, Leruth 2015). Undoubtedly studying differentiated integration contributes to the better and more refined theoretical and empirical understanding of the European integration process as such (Genschel, Jachtenfuchs 2014). Differentiated integration can be best understood as the institutional response to the increasing heterogeneity of the member states preferences and capacities resulting both from the widening and the deepening of the EU (Leuffen *at al* 2013, Schimmelfennig 2014).

The political idea of differentiated integration can be tracked back to the famous Tindemans report (1975), whereas as a legal concept it appeared in the Single European Act (1986). The academic debates on the topic find their roots in Dahrendorf's formulation of *Europe a la carte* (1970s.). Already by the 1980s. scholars have identified several variations of differentiated integration and the scientific discourse has exploded ever since. From that moment on many various conceptualisations can be traced in the literature, including flexible integration, multi-speed Europe, Europe as an empire, Europe of variable geometries, concentric circles, hemispheres, etc. (Jensen, Slapin 2012, De Neve 2007, Zielonka 2007, Koelliker 2001). Yet differentiated integration is understudied in comparison with the huge literature on integration as a whole. The reason for it may be it has been limited by an assumption that differentiated integration would erode over time (Lord, Leruth 2015). That member states (and their neighborhood) would converge over time, the same variously applied policies would find their cohesive end. This assumption was however challenged by the crisis (Lemke 2014). The new one suggests that we are heading towards some more diversified forms of integration. It is John Eric Fossum who claims that the EU of tomorrow may combine all three of the following: accelerated integration for some, outright disintegration for others and greater differentiation for the rest (Fossum 2015). The idea that differentiated integration amounts to little more than a process of convergence on similar outcomes at different speeds, seems increasingly questionable. Instead we observe a growing consensus among the observers and analysts that differentiated integration is a permanent organizational principle of the EU. The need to manage divisions or disagreements will no simply go away (Lord, Leruth 2015).

There is many ways of analyzing this multifaceted phenomenon, from the analysis of the primary and secondary law (Szwarc 2005, Zhelyankova 2014), through multilateral negotiations (Winzen, Schimmelfennig 2015), up to the party politics (Leruth 2015) in the domestic contexts. It can be studied as a phenomenon, concept, process or as a system (Dyson, Sepos 2010). The complexity and plurality of approaches is justified by the very nature of differentiated integration. This chapter offers a scholastic approach which tries to integrate the national level, which appeared to be decisive in the British case, together with the sub-national level and supra-national level of analysis.

The Central and Eastern European perspective on the Eurozone is a complex and intriguing one (Riedel 2017). On one side the majority of countries of the 2004, 2007 and 2013 enlargements belong to the Euroclub. On the other side still, the largest economies of the region, that is Poland, Hungary and the Czech Republic (as counted by the population, territory or the GDP) stubbornly stay outside of it, without much prospect for joining in the foreseeable future. Both insiders and outsiders grew comparatively fast, both groups had similar experience with the economic crisis. The citizens do not see much difference if they are better off inside or outside of the Eurozone. Nevertheless, several eastern-European countries already peg their currency to the euro or to a currency basket that includes the euro (among those that did not adopt Euro in the past) (Brown, Stix, 2014). One cannot forget that the monetary union in Europe is a hybrid between a fixed exchange rate system and a unitary state. Consequently no theoretical model can capture its characteristics, neither the closed-economy macro models nor classical international macro models (Muenchau 2013, 535).

For the Central and Eastern European new EU member states, the so far comfortable situation of voluntary and non-consequential opt-in or opt-out type of participation in the European monetary union is coming to an end. In the foreseeable future, the evolving system will require critical decision about participating in the core of the union or remaining at the peripheries. Whereas the two situations will differ much from today's ones as well as they will constitute just scope conditions of the whole spectrum in-between. The fiscal union of the most integrated countries will create externalities with far-going consequences. The integration of financial systems, banking union, stronger fiscal and economic union will spill over into the reform of the institutional system of the EU. Such a shift in integration priorities would hit predominantly the countries focused on the cohesion policy and its redistributive outcomes.

### **3. Problem Solution**

The future scenarios for the evolution of the monetary regime in Europe span from the quasi-federal solutions, up to soft modes of coordination. The most ambitious plans foresee the development of the solidarity mechanisms allowing the redistribution of fiscal capacities in the scale of the continent, or at least the Eurozone. Such fiscal federalism would not only stronger unite the core states and their economies creating a community of fate, but it would also create some externalities for the non-members. The outer core or peripheries would suffer further marginalisation as a consequence of institutionalisation the enhanced fiscal coordination. Separate groupings in the EU Parliament and Council as well as maybe also in the EU Commission, together with the separate Eurozone budget, mutualisation of debt and related fiscal solidarity would communitarize the core countries to a large extend and at the same time it would leave the remaining states outside of the mainstream of the European integration project. The scope and level of differentiation would increase tremendously, in an unprecedented scale.

The story of European integration can be told as a story of its deepening and widening – these two dynamics have found the mechanics of differentiation so far. Consequently the progress in integration meant the increase in differentiation over time (Schimmelfenning, Winzen 2014). However the most recent political and economic developments in the European Union and beyond clearly show that the differentiation gained its momentum and its dynamics has accelerated. This constitutes the extraordinary significance of the scientific problem to be solved. One of the most important characteristics of the contemporary European integration process requires further exploration in order to advance our understanding of its dynamics and determinants. It is fundamentally important from the point of view of the scholarly explanations as well as it is furthermore crucially salient from the practical point of view of the real-existing phenomena – shedding some light on the critical point in which the uniting Europe has found itself. The scholarly deliberations in this regard are vitally important for the real life politics at domestic and European level. The decision-makers (officials, politicians, public servants, etc.), opinion leaders (journalists, experts, activists, etc.) and many other social groups will benefit from the enhanced knowledge generated in this field.

One of the most important facts to be realised in the context of the anticipated enhanced differentiation in the sphere of the supranationalized monetary policy, is the imbalance between the Eurozone and the non-Eurozone countries. Especially after the United Kingdom's potential leaving the European Union, the biggest non-Eurozone economy of the EU would remain Poland. The cumulated GDP of the EU non-Eurozone members would constitute less than 10% of the total EU GDP. This figure shows that the EU equalizes the Eurozone and the non-Eurozone countries will suffer further and further peripherization in the process of time. New financial and institutional settings will disconnect them not only from the access to

substantial parts of the EU budgets but also from the key decision making bodies that would gravitate around the fiscal federalist solutions.

The above mentioned dynamics may easily become an engine for disintegration. Without access to EU financial resources and participation in the real decision making process, the membership may soon be evaluated as much less valuable for the peripheries. If confronted with the “take it or leave it” dilemma, many of the sceptics of the communitarized monetary integration, would likely opt for the EU-exit scenarios (Riedel 2016). From this point of view, in the long-time perspective the federalisation of monetary regimes (and related policies) may bring about the consolidation effect in the core of EU and, at the same time, some disintegration tendencies in the peripheries.

#### 4. Conclusion

The emerging system of differentiation is based on the relation of EU member states' economies towards the supranationalised monetary union. The last economic crisis revealed, in a sharp contrast, some deficiencies of the so-far solutions of the monetary integration. In line with the logic of integration “from one crisis to another” the EU developed some solutions (experimental fiscal federalism) improving the system in the most optimal, possible way. Far from perfect, as always in the EU context, but build on the compromise and the lowest common denominator, the Eurozone has learnt its lesson from the last economic crisis. The implemented solutions are far from being ideal and therefore the political agenda is filled with the further reform proposals enhancing the system into some (quasi) federal structure. The difficulties to reach an agreement among the twenty eight (and possibly twenty seven member states, in case of the Brexit process coming to conclusion) countries condemn the worked out solutions into the system of even more differentiated integration.

Differentiation in Europe has reached such a phase, scale and depth in which it is legitimate to agree to the argument that it is a systematic characteristic of the European integration project as seen in XXI century. Frank Schimmelfennig, Dirk Leuffen and Berthold Rittberger wrote even about the system of differentiated integration, in which differentiation is essential and enduring characteristic of the EU (Schimmelfennig, Leuffen, Rittberger 2015). Directly after the Brexit referendum, the initial six founding states (Germany, France, Italy, Belgium, Luxemburg and the Netherlands) met in Berlin in order to discuss the new circumstances generated by the Brexit earthquake as well as to identify the options ahead. Symptomatically, the rest of the EU was called to a meeting in Warsaw a day later for the same purpose. The new divisions in Europe became even more clear in the sharp picture after the British decided to leave. Brexit gave the differentiated integration new impetus and dynamics. The near future will reveal whether it was a turning point, reversing the trend towards disintegration.

Together with the economic crisis, the Brexit process constitutes one of the most important driving forces behind the enhancing differentiation. Once the new form of fiscal federalism is established and the solidarity transfers in place, the institutional system of the will need to be adjusted as well. It will be, most probably, a flexible system based on the principle of “Bund der Willigen” (the Coalition of the Willing), this is why the author calls the process of building the new system of differentiation, a *Helvetisation*. It will be a voluntary process, just like at the beginning of the Swiss Confederation, which will give a new beginning and dynamics for the new evolutionary path. The path that may end in a federalized structure.

## References

- [1] Andersen S., Sitter N. (2006). *Differentiated Integration: What is it and How Much Can the EU Accommodate?*, „European Integration” vol. 28, No 4
- [2] Bernstein A. (2016). *To Brexit or to Brexit?*, “News Extra” April 2016, p. 7
- [3] Boerzel T. (2005). *Mind the Gap! European Integration between Level and Scope*, “Journal of European Public Policy” 12(2): pp. 217–36
- [4] Brown M., Stix H. (2014). *The Euroization of Bank Deposits in Eastern Europe*, “Working Paper Oesterreichische Nationalbank” nr 197
- [5] Dahredorf R. (1973), *Plädoyer für die Europäische Union*, München-Zürich 1973
- [6] De Neve, J-E. (2009). *The European Union? How Differentiated Integration is Reshaping the EU*, “European Integration”,<sup>[1]</sup><sub>[SEP]</sub> September 2007, Vol. 29, No. 4, pp. 503–521
- [7] Deutsch K. (1957). *Political Community and the North Atlantic Area: International Organisation in the Light of Historical Experience*, Princeton
- [8] Duttler T. (2016). *Differentiated Integration at the EU Member State Level. An Empirical Comparison of European Integration Theories*, Nomos, Baden Baden.
- [9] Dyson K., Sepos A. (2010). *Differentiation as a Design Principle and as a Tool in the Political Management of European Integration*, (in:) Which Europe? The Politics of Differentiated Integration (eds). Dyson Kenneth, Sepos Angelos, Palgrave Macmillan, pp. 3-23
- [10] Fossum J. E. (2015). *Democracy and Differentiation in Europe*, „Journal of European Public Policy”, 2015, 22:6, s. 799-815
- [11] Genschel P., Jachtenfuchs M. (2014). *Introduction: Beyond Market Regulation. Analysing the European Integration of Core State Powers*, In: *Beyond the Regulatory Polity? The European Integration of Core State Powers*, (eds) P. Genschel and M. Jachtenfuchs. Oxford: Oxford University Press, pp.1-23
- [12] Hodgson P. (2016). *Complying with Brexit*, “Compliance Week” May 2016, pp. 53-55
- [13] Jensen D., Slapin, J. (2012). *Institutional hokey-pokey: the politics of multispeed integration in the European Union*, “Journal of European Public Policy” 19(6): pp. 779 – 95
- [14] Koelliker A. (2001). "Bringing together or driving apart the union? Towards a theory of differentiated integration." *West European Politics* 24 (4): pp. 125 – 51
- [15] Lemke C. (2014). *Challenging the “Ever Closer Union”*: *Political Consequences of the Eurozone Crisis*, “American Foreign Policy Interests”, 36, pp.18–24
- [16] Leruth B. (2015). *Operationalizing national preferences on Europe and differentiated integration*, „Journal of European Public Policy”, 22:6, pp. 816-835
- [17] Leruth B., Christopher L. (2015). *Differentiated integration in the European Union: a concept, a process, a system or a theory?* „Journal of European Public Policy”, 22:6, pp. 754-764

- [18] Leuffen D., Rittberger B., Schimmelfennig F. (2013). *Differentiated Integration. Explaining Variation in the European Union*, Basingstoke: Palgrave
- [19] Mohler L., Seitz M. (2012). *The gains from variety in the European Union*, „Review of World Economics” nr 148 / 2012, pp. 475-500
- [20] Muenchau W. (2013). *The Euro at a Crossroads*, “Cato Journal”, Vol. 33, No. 3 (Fall 2013), p. 535 – 540
- [21] Riedel R. (2017). *The Evolution of the Polish Central Bank’s Perspectives on the Eurozone Entry*, „Post-Communist Economies” Routledge (2017), 29:1, pp. 106-116
- [22] Riedel R. (2016). *EUROScepticism of Euroenthusiasts*, in: *ICEI 2016 Proceedings of the 3rd International Conference on European Integration*, 2nd part, Ostrava 2016, p. 808-812
- [23] Schimmelfennig F. (2014). *EU enlargement and differentiated integration: discrimination or equal treatment?*, “Journal of European Public Policy” 21 (5), pp. 681-98
- [24] Szwarc M. (2015). *Zróźnicowana integracja i wzmocniona współpraca w prawie Unii Europejskiej*, Warszawa 2005
- [25] Winzen T., Schimmelfennig F. (2015). *The Choice for Differentiated Europe; Why European Union Member States Opt out of Integration*, paper prepared for the 14th biennial conference of the European Union Studies Association, 5-7 March 2015, Boston MA, USA
- [26] Zielonka J. (2007). *Europa jako imperium. Nowe spojrzenie na Unię Europejską*. PISM, Warszawa
- [27] Zhelyankova A. (2014). *From selective integration into selective implementation: The link between differentiated integration and conformity with EU laws*, “European Journal of Political Research” 53: 2014, pp. 727–746



## Smart Cities and Challenges for European Integration

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### **Abstract**

*European integration is a multidimensional process, which can be seen both in economic and innovations aspects. The growth of importance of digitalization and smart cities development can be analysed as a factor of European integration. A significant number of smart cities, which may be connected in a network, is located in Western Europe. This article reflects on searching for European Integration conditions as was as for turning points in digitalization process. It is intended to draw attention to several issues related to European Integration, which are crucial from the vantage point of Europe's prospective development. Location of smart cities and their networks indicates on weak innovation capacity and development disparities in some member countries of European Union. Therefore, smart cities can be also an indicator of European integration process but their wider cooperation can create new solutions for developing regions of European Union.*

**Keywords:** European Integration, smart city, smart cities network

**JEL Classification:** G18, L86, O18, O19, N14

### **1. Introduction**

The contemporary growth of the economy is determined by a number of simultaneous processes such as: globalization, scientific and technical revolution connected with the expansion of internet technologies and telecommunication technologies, system transformation of post-socialist countries and their more or less successful attempts at European Integration. Progress is caused by many factors which have the ability and strength to influence the structure of the European Union. One of them is digitization in form of Industry 4.0, because is an element of economic growth and it can be seen as a part of European integration process. Moreover some digitization aspects create all necessary infrastructure for integration processes (Klímová and Žitek, 2012).

In this paper the digitization is analysed as a factor of European integration process based on term “smart city”, which in connection with European Union and its cities is important to discuss. The article reflects on searching for European Integration conditions as well as for turning points in digitalization process. It is intended to draw attention to several issues related to European Integration, which are crucial from the vantage point of Europe's prospective development. The formulated problem is based on characteristic of smart cities, which create network of well managed and developed cities located in Western Europe mainly in so-called “old European Union” countries, and indicate on weaker innovation capacity in some other regions of EU and significant development disparities.

## 2. The Definition of Smart City

The ongoing digitization is not only restricted to the classic factories and manufacturing economic sector. Indeed is the so called Industry 4.0 almost fully connected with this sector of the economy, but many parts of it are easy to find in other sectors of private and public life i.e. in cities. In case of privacy the influence of technical and digital improvements has the name of smart home. And in this specific case the digitization concentrated around few themes, like energy management (contains heating and cooling system management), but also communication between human and machine; machine in form of household facilities i.e. refrigerator, oven, TV. But in this particular paper the digitization on this private sphere would not be discussed. We decided to focus on the public sector and special on the Smart Cities and possibilities to create networks containing them.

Looking back in the past to the 20th century there can be defined two main reasons, which caused growth of greater cities and on the other site the marginalization of the rural spaces. These are the urbanisation and continuously higher importance of so called Information and Communication Technologies (ICT). Beside also other two evident factors were the economic acceleration and the technological innovations in the urban environment, that mainly speed up in 1980's and 1990's (Cocchia [online], 2014, p. 14).

One of the two terms, which are mainly in use to explain the continuously digital implementation in urban spaces are the Smart or Digital City. Other words, that embrace this same, but seldom to find are: intelligent city, ubiquitous city or sustainable city (Cocchia [online], 2014, p. 13). Between the scientists there is no one ultimate description of the term Smart City or Digital City. In following two tables each Smart City and Digital City definitions are presented, but all of them show a different approach to the topic of new-age city.

**Table 1: Extraction of Different Meaning of the Term Smart City**

Source	Definition
(Su, Li and Fu, 2011, p.1029)	“Smart City is the product of Digital City combined with the Internet of Things”
(Northstream [online], 2018, p. 4)	“A Smart City uses innovation and technology to contribute to sustainability, an efficient use of resources, and a higher quality of life for its citizens.”
(Hall, 2000, p. 635)	“A city that monitors and integrates conditions of all of its critical infrastructures, including roads, bridges, tunnels, rails, subways, airports, seaports, communications, water, power, even major buildings, can better optimize its resources, plan its preventive maintenance activities, and monitor security aspects while maximizing services to its citizens”

Source: listed in the left side of this table.

Taking into consideration definitions mentioned above it is possible to define smart city as a city, which is smart if investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure promote sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance. Then idea of smart city can be distinguished in to digital city which is more connected to new internet based technologies. The Digital City definition then is more focused on technical aspect of its maintenance. In Table 2 definitions of digital city presented and compared.

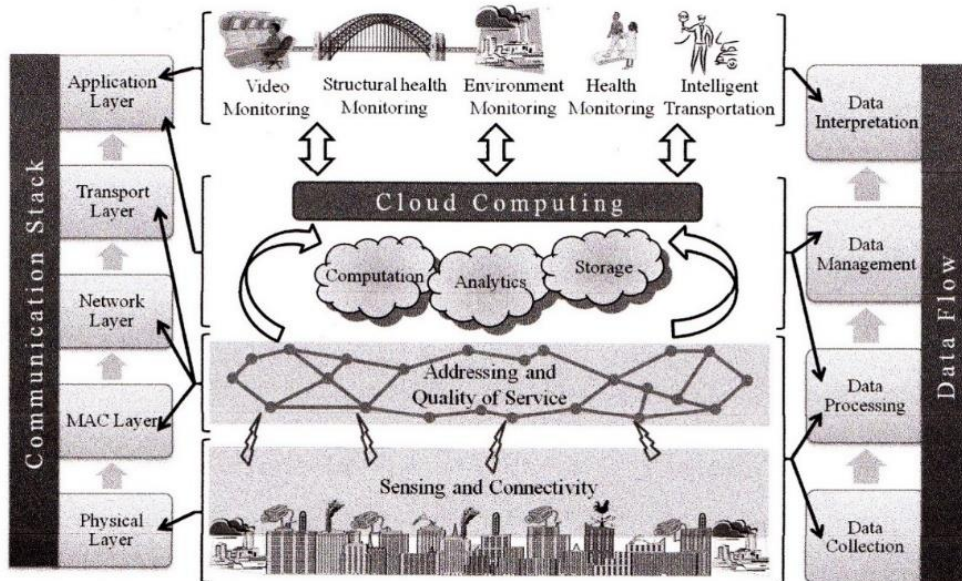
**Table 2: Extraction of Different Meaning of the Term Digital City**

Source	Definition
(Qi and Shaofu, 2001, p. 32)	“A digital city is substantively an open, complex and adaptive system based on computer network and urban information resources, which forms a virtual digital space for a city. It creates an information service marketplace and information resource deployment centre”
(Ishida and Hiramotsu, 2001, p. 106)	“The concept of Digital City is to build an arena in which people in regional communities can interact and share knowledge, experiences, and mutual interests. Digital City integrates urban information (both achievable and real time) and create public spaces in the Internet for people living/visiting the city”
(Komminos, 2008, p.120).	“Digital city denotes an area that combines broadband communication infrastructure with flexible, service-oriented computing systems. These new digital infrastructures seek to ensure better services for citizens, consumers and business in a specific area”

Source: listed in the left side of this table.

According to the concept of Smart City there can be defined three key determinants: technology, people and institutions (Taewoo and Pardo [online], 2011, p. 282). From the technological side it contains all elements of technological infrastructure needed to maintain a functioning of Smart City. On the other side at least it's important to strengthening human individuals in case of continuous learning (Kollár and Melková, 2014). Last crucial essential components of it are institutions i.e. in form of governance. Especially the governance is responsible for the engagement of its citizens and improvements on an institutional layer.

The overall concept of Smart City is not entirely new. But what is new, is the usage of so called ICT in term of implementation in city surround (Taewoo and Pardo [online], 2011, p. 283). The main purpose of it to integrate the important services ongoing in city infrastructure. The smartness of a Smart City is mainly grounded by usability of ICT and especially the recent emerging technology of Internet of Things (IoT). It's even more than that. In such an evolutionary environment exist a ubiquitous Internet network that not only receives the information from interconnected objects (on a hardware level). Such new-aged Internet also interact with the physical world through every kind of actuators and giving commands and controlling even providing information transfer services or analytics (Jiong et al. [online], 2013, p. 1). An example of working of IoT in a Smart City environment is presented in a Picture 1.

**Figure 1: Extraction of Different Meaning of the Term Smart City**

Source: Jiong et. al (2013, p. 3)

The continuous increase of population in cities conduct to a higher density in urban centres. Year 2008 was a very significant year in this case, in that more than 50% of a world's population (this meant to that time 3,3 billions of individuals) lived in urban places. The forecast till 2030 shows also this trend, where the total amount of people living in cities are going to be 5 billion (Taewoo and Pardo [online], 2011, p. 282). By 2050 this number will cross the line of 6 billion if individuals, which is equal to a 70% of the expected world's population, where the center of them lifes are going to be the big cities or the surrounding regions (Jiong et. al [online], 2013, p. 1). According to the definitions of Smart City it's possible to find even nowadays few examples of this type of cities, and there can be defined overall three main geographic spots of accumulation of so called Smart Cities which are:

- a) South East Asia (mainly China),
- b) North-Western and South-Western Europe,
- c) East and West of North America (USA and Canada).

Listed above regions have one characteristics in common all these spaces are to find at or near to coast-sides and lead to formulation of problem.

### 3. Problem Formulation

The main problem can be formulated based on characteristic of smart cities, which create network of well managed and developed cities located in Western Europe mainly in so-called "old European Union" countries, and indicate on weaker innovation capacity in some other regions of EU and significant development disparities. On the other hand, this dynamic economic growth leads to numerous hazards typical of economies that enter the path of fast development. Moreover, the European economy features innovation capacity that is weaker than that of the USA when measured by the traditional ratio of R&D to GNP expenditures, but is also characterized by the share of innovative high tech products in the EU exports and the

pace of expenditure growth (Sulikova et al., 2015). The innovation capacity of economies is the result of knowledge development which becomes the most important. This resource grows in the process of its being exploited in smart city concept. Moreover European countries are characterized by considerable differences in the development level. That may be a future European integration asset, if it is considered that less developed countries will manage to catch up in the field of development.

#### 4. Problem Solution

The concept of Smart City tries to solve problems, which came onto surface in the same time of rapid increase of population in big cities. That problems are for example deteriorating conditions in transportation and air. The highest goal is defined as a creation of better life for their citizens living in this environment. The vision of Smart City (Taewoo and Pardo [online], 2011, p. 283) are to gain improvements on such areas as: transportation, mobility, environment, energy consumption, safety and so on. The basic of effective realisation of Smart City is the digital hardware. From this site it's necessary to enrich every kind of facilities to find in a city, like: private households, schools, universities, airports, main stations, hospitals. These buildings have to be equipped with sensors, actuators, as embedded devices and mobile terminals. A fully digitalized Smart City contains of: sensors level, storage level, analytics including the right data interpretations (Jiong et. al [online], 2013, p. 2).

Since the European Integration process has diminished differences in economic, social and environmental standards, cities have converged in their basic conditions for competition, which is increasingly scaled down from the national level to the level of cities and regions (Giffinger and Haindlmaier, 2010, p.8). This trend enhances the importance of specific local six characteristics (Table 3).

**Table 2: List of Characteristics and Areas of Smart City Enhancing European Integration**

Areas	Characteristics
Competitiveness	Smart Economy, described by: innovative spirit, entrepreneurship, economic image and trademarks, productivity, flexibility of labour market, international embeddedness, ability to transform.
Social and human capital	Smart People, represented by: level of qualification, affinity to lifelong learning, social and ethnic plurality, flexibility, creativity, cosmopolitanism/open-mindedness, participation in public life.
Participation	Smart Governance: participation in decision-making, public and social services, transparent governance, political strategies & perspectives
Transport and ICT	Smart Mobility: local accessibility, (inter-)national accessibility, availability of ICT-infrastructure, sustainable, innovative and safe transport systems.
Natural resource	Smart Environment: lack of pollution of natural conditions, pollution, environmental protection, sustainable resource management.
Quality of life	Smart Living: cultural facilities, health conditions, individual safety, housing quality, education facilities, touristic, social cohesion

Source: (Giffinger and Haindlmaier, 2010, p.14-15)

There are different areas of city's life, in which a concept of Smart City gives promising improvements. The added-value is expected on a ground of: health, wellbeing mobility,

pollution or productivity. So from the health site many applications are according to noise limitations, air and water quality ensuring (Vlček, Čemerková and Wilczková, 2014). To the examples of the Smart City in terms of transportations, there are to define the mobility of pedestrians, cyclists, cars, freight vehicles or a smart public smart monitoring system, which helps easily to find empty spots in a neighbourhood without long searching process (Jiong et. al [online], 2013, p. 2). The same approach can be expected in case of energy management and the methods of resources savings (Klímová and Žitek, 2012).

## 5. Conclusion

Creation of Smart Cities in Western Europe leads to creation Europe of two speeds of development, and creates peripheries in European Union. When some part of EU become periphery then all Europe become it. To prevent such situation significant increase in research and development expenditures and directing them at the areas that have been discussed above, as well as a coherent European policy determining medium and long term goals in the field of innovation policies and science development. Necessary is also a “new opening” in the area of regional convergence, creation of economically strong economic regions, which may also contain border areas that have similar economic position, are culturally closely connected and boast development potential.

Growth of the economy and progress in European Consistent realization of the idea of society based on knowledge, achieved through support and spread of innovative technologies (ICT) and development of Smart or Digital Cities need balanced management to create also favourable conditions for social life and environmentally friendly technologies and their implementation. Growth of the economy and progress in European integration is based on innovations related to technical revolution and the smart cities development in area of the Industry 4.0 technology. Consistent realization of the idea of society based on knowledge, achieved through support and spread of innovative technologies (ICT) and development of Smart or Digital Cities need balanced management to create also favourable conditions for social life and environmentally friendly technologies and their implementation. Smart cities are based on the newest achievements, dedicated for the citizens’ prosperity and protection combined with the natural environment care. Quantitative analysis based on data related to smart cities development and their direct impact on the European integration should be examined in further researches.

## References

- [1] Cocchia, A. (2014). *Smart and Digital City: A Systematic Literature Review*. Department of Economics, University of Genoa; Genoa, Italy; Springer International Publishing Switzerland [online]; [cit.2018-01-22]. Available at: <https://pdfs.semanticscholar.org/bec8/ebf5616f44ae36363cbfbd575ac517642c0a.pdf>
- [2] European Commission (2012). *European Initiative on Smart Cities* [online]. [cit.2018-02-05]. Available at: <http://setis.ec.europa.eu/implementation/technology-roadmap/European-initiative-on-smart-cities>.
- [3] Giffinger, R. and Haindlmaier, G. (2010). Smart cities ranking: an effective instrument for the positioning of cities? *Architecture, City and Environment = Arquitectura, Ciudad y Entorno*, vol. IV, iss. 12, pp. 7-25
- [4] Hall, P. (2000). Creative cities and economic development. *Urban Studies*. 37(4), pp. 633-649.

- [5] Ishida, T. and Hiramotsu, K. (2001). An augmented web space for digital cities. *Proceedings of Symposium on Applications and the Internet*. pp. 105-112.
- [6] Jiong, J., Jayavardhana, G., Slaven, M., Marimuthu, P. (2013). *An Information Framework of Creating a Smart City through Internet of Things*. Faculty of Engineering and Industrial Sciences – Swinburne University of Technology, Hawthorn, Australia. Department of Electrical and Electronic Engineering – The University of Melbourne, Parkville, Australia. In *IEEE*. [online]. [cit.2018-01-24]. Available at: <https://pdfs.semanticscholar.org/4851/fa729df5c475d80713f66f763105284f3ef1.pdf>
- [7] Klímová, V. and Žitek, V. (2012). Selected Aspects of the Innovation Environment in the South Moravian and the Moravian-Silesian Regions. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 117-130.
- [8] Kollár, D. and Melková, M. (2014). Positives and Negatives of the European Digital Single Market. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 463-471.
- [9] Komninos, N. (2008). *Intelligent cities and globalization of innovation networks*. London: Routledge. pp. 301.
- [10] Northstream (2018). *Smart Buildings: the heart of a Smart City; White paper* [online]; [cit.2018-01-23]. Available at: <file:///C:/Users/rothe%20robert/Downloads/Northstream-White-Paper-Smart-Buildings-the-heart-of-a-Smart-City.pdf>. pp. 1-17.
- [11] Qi, L., Shaofu, L. (2001). Research on digital city framework architecture. In *IEEE International Conferences on Info-Tech and Info-Net*. Proceedings ICII. vol. 1, pp. 30-36.
- [12] Su, K., Li, J., and Fu, H. (2011). Smart city and the applications. In *IEEE International Conference on Electronics, Communications and Control (ICECC)*, pp. 1028-1031.
- [13] Sulikova, V., Djukic, M., Gazda, V. and Kulhanek L. (2015) Asymmetric Impact of Public Debt on Economic Growth in Selected EU Countries, *Ekonomicky Casopis*, vol. 63, issue 9, pp. 944-958.
- [14] Taewoo, N. and Pardo T. (2011). Conceptualizing Smart City with Dimensions of Technology, People, and Institutions. In *The Proceedings of the 12<sup>th</sup> Annual International Conference on Digital Government Research*. Center for Technology in Government; University at Albany. State University of New York, U.S. [online]. [cit.2018-01-22]. Available at: [https://www.ctg.albany.edu/publications/journals/dgo\\_2011\\_smartcity/dgo\\_2011\\_smartcity.pdf](https://www.ctg.albany.edu/publications/journals/dgo_2011_smartcity/dgo_2011_smartcity.pdf).
- [15] Vlček, P., Čemerková Š. and Wilczková M. (2014). Establishing of the Customer Service Level of Cities and Villages. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 754 -762.
- [16] Yovanof, G. S., and Hazapis G. N. (2009). An architectural framework and enabling wireless technologies for digital cities and intelligent urban environments. *Wireless Personal Communications*, 49(3), pp. 445-463.

## The Level of Eco-Innovations in the EU Member States

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### **Abstract**

*The development of eco-innovation is a necessary 'tool' to permanently reduce human pressure on the environment and efficient use of dwindling natural resources. Increasingly, however, literature emphasizes the role of eco-innovation as one of the basic factors of sustainable development. The article presents issues concerning eco-innovation, its later part analyses the capabilities and limitations of their introduction to the economy of selected European Union countries, including Poland. The aim of the study is to systematize the knowledge of environmental investment, and to indicate the possibility and necessity of their continuous development. The methodology used is based on an analysis of available literature and analysis of statistical data.*

**Keywords:** *eco-innovation, eco-innovation inputs and outputs, Eco-IS in EU countries*

**JEL Classification:** *F23, O39, Q52*

### **1. Introduction**

Socio-economic development has brought a number of indisputable opportunities but at the same time developed societies have never been struggling with challenges of so many kinds. Together with growing economies and societies, we have been witnessing the escalation of problems of demographic, societal (Szczygiel, Almeida, 2017) and ecological nature leading to works on economic growth, power generation and sustainability (Bento, Szczygiel and Moutinho 2017), and raising discussion on policies, methods and tools in practice. In view of increasing pollution and depletion of natural resources, environmental investments are now of interest to both researchers and decision-makers. However, some EU member states have different environmental competitive advantages and economical characteristics (Sulikova, Djukic, Gazda, Kulhanek, 2015). In all highly developed countries, it emphasizes that without the implementation of eco-innovation to the economy cannot be an effective solution to the growing environmental problems. The development of eco-innovation is a necessary 'tool' to permanently reduce human pressure on the environment and efficient use of dwindling natural resources. Already in the 90s of the twentieth century began research on eco-innovation. On their development, they influenced, among others, increase awareness of environmental threats, as well as seeking more sustainable model of economic development. The pioneers of this study were C. Fussler, P. James, R. Kemp and P. Pearson.



The concept of 'co-innovation' is relatively new. The prefix 'eco' comes from the word ecology, while by the 'innovation' we mean everything that is new. The aim of eco-innovation is the development of new products and processes that significantly reduce their negative impact on the environment. National as well as foreign literature on eco-innovation is quite poor. Increasingly, however, it emphasizes the role of eco-innovation as one of the basic factors of sustainable development. Thanks to them so-called 'clean technologies', and the economy becomes more 'organic'. The development of this kind of innovation is one of the elements of the OECD strategy which assumes encouraging companies limit their harmful effects on the environment and to finance research for this purpose.

The first part of the article presents issues concerning eco-innovation, its later part analyses the capabilities and limitations of their introduction to the economy of selected European Union countries, including Poland. It will contribute to science. The aim of the study is not only to systematize the knowledge of environmental investment, but above all an indication of the possibility and necessity of their continuous development in the European Union.

## **2. Methodology**

The methodology used is based on an analysis of available literature and analysis of statistical data. In statistical analysis, data for the years 2010-2016 have been used. The data have been acquired from official sources about EU countries. As a preliminary tool, the descriptive method is used. It consists of isolating and describing some definitions of eco-innovation. The following part of the study presents the measurement of eco-innovativeness in Poland and in European Union countries.

Measuring the level of innovation in a country is difficult, but examining the level of eco-innovation is even more difficult. This involves difficulties related to determining the scope of research, as well as the method of measuring the effects of introducing new environmental solutions. Attention should be drawn here to the Eco-Innovation Observatory, which is an EU initiative focused on the research of eco-innovations in the European Union. On the basis of the collected data, since 2011 it has been issuing a yearly ranking called the Eco - Innovation Scoreboard (Eco -IS) (Szpor, Śniegocki, 2012).

16 indicators divided into five groups are used to measure the levels of eco-innovation. Expenditures, or 'Eco-innovation inputs are the first one of the five areas in the Eco-Innovation Scoreboard. The index for this area is calculated based on three indicators: government investments in environmental and energy R&D, green early stage investments and total R&D personnel. Eco-innovation activities are number two; the index for this area is calculated based on three indicators: Implementation of innovation activities to reduce material inputs per unit of output in companies, implementation of innovation activities to reduce energy inputs per unit of output in companies and firms with environmental management (ISO 14001) systems.

Eco-innovation outputs are the next area in the Eco-Innovation Scoreboard. The index for this area is based on three indicators: eco-innovation related patents, academic publications related to eco-innovation and coverage of 'eco-innovation' in electronic media. For a detailed description of the indicators included in the Eco-Innovation Scoreboard and the calculation details. Resource efficiency outcomes are the next area in the Eco-Innovation Scoreboard. The index for this area is calculated based on four indicators: countries' productivities in material consumption, energy use and water use as well as countries' intensity of GHG emissions.

The index for socio-economic outcomes is calculated based on three indicators: Exports of products from eco-industries (% of total exports), employment in eco-industries (% of total workforce) and turnover in eco-industries' (<http://database.eco-innovation.eu/> access: 03,01,2016).

### **3. Result and Discussion**

Eco-innovation is a very important element of modern economies increasingly decisive for their competitiveness. Therefore, it is worth paying attention to what they are and what determines that innovation is ecological. The EU countries are characterized by a fairly large variation in the level of eco-innovation, and in most cases have a fairly stable position in this ranking. Poland ranks at one of the last places, which indicates a low level of eco-innovation compared to the EU average.

#### ***3.1 The Essence of Eco-innovation***

Eco-innovation, due to the greater complexity and different hierarchy of objectives is very different from innovation in general. In the literature there are many definitions of the term. This paper does not aim at deeper analysis of them all, but concentrates on the development of the major ones. The concept of innovation is steadily evolving, which is why it was assumed, that 'innovation is a new or a significantly improved product, process, goods or service introduced to the market or to a company. Innovation uses the results of technological developments, new combinations of existing technology or utilization of other knowledge desired by the company' (Wozniak et al., 2006).

According to the classical definition of eco-innovation, it is a new product that provides value for the customer and for business, while significantly reducing the negative impact on the environment (James, 2001). Innovations implemented by a business entity are defined as 'the implementation of a new or significantly improved product or process, a new organizational method or marketing, in practice, economic, workplace organization or external relations' (Oslo Manual, 2008). By eco-innovations, some authors understand 'all new forms of activities aimed at significant and demonstrable progress towards the goal of sustainable development, through reducing impacts on the environment or achieving a more efficient and responsible use of natural resources, including energy' (Prystrom, 2013). Eco-innovation is 'intentional conduct characterized by the establishment, comprising the stage of product design and integrated management during its lifecycle, which contributes to ecological modernization of the industrial age population by addressing the environmental problems in developing products and related processes. Eco-innovation leads to integrated solutions aimed at reducing energy and resource use, while improving product quality and services. Technological innovation is one way of eco-innovations' (Carley, Spapens, 2000). Moreover, ecological product innovation is an innovation that integrates ecological features of the product and technology lifecycle (from 'cradle to grave'), highlighting the same product against competitive products. Its goal is to realize the assumptions of 'environmental quality' (Chodyński, 2003).

The examples of definitions of eco-innovation presented above show that in practice it may take various forms. Despite the fact that the literature on this subject mentions three main groups of definitions; namely: environmental technologies, eco-effective innovations and system innovations, their common feature is that they all contribute to reducing environmental burdens by economic operators. As to the characteristics of these burdens, they vary quite significantly (Graczyk, Kazmierczak-Beer, 2011). Therefore, defining eco-innovation in a synthetic way it should be stated that eco-innovation is an innovation aimed at improving

relations between business and environment; and it can affect every environmental aspect of the business activity. On the level of strategic expectations of an enterprise, the activities related to the improvement of this relationship should primarily aim at such expansion of the system of eco-innovation within the economic entity, which will ensure that in the future it will be eco-efficient, by reducing the environmental (ecological) risk and bring benefits for the enterprise, as well as ensure its success (Graczyk, 2008). Eco-innovation is the innovation which seeks to reduce the burden on the environment and to achieve a specified performance environment. Eco-innovation is a policy of reducing pressure on the environment by using environmentally-friendly solutions. Eco-innovation solution is one which is innovative compared to solve the most modern (Jarża, 2013). Eco-innovation is most often understood as innovation (that is, changes in technology, organizational structure and management of the company which are designed to eliminate or at least reduce the negative impact of business on the environment (Witkowski, 2008).

In Poland, the concept of eco-innovations have been comprehensively for the first time defined only in 2009 by the Central Statistical Office as ‘innovation that benefits the environment, as a new or significantly improved product (product or service), process, marketing method or organization that bring environmental benefits compared with the alternatives’ (Activities, 2010). In contrast, at the European level to define this concept taken, among others The European Commission, the OECD and Eurostat. The European Commission defines eco-innovation as ‘a form of innovation aiming at significant and demonstrable progress towards achieving the objectives of sustainable development by reducing the impact on the environment or achieving a more efficient and responsible use of natural resources, including energy’ (Competitiveness, 2006). The Framework Programme for Competitiveness and Innovation eco-innovation defined as such innovations that reduce environmental impacts or have the purpose of making better use of environmental resources and thus serve sustainable development (Decyzja NR 1639/2006/WE Parlamentu Europejskiego i Rady z dnia 24 października 2006 r. ustanawiająca Program ramowy na rzecz konkurencyjności i innowacji (2007–2013), Dziennik Urzędowy Unii Europejskiej, L 310/15).

Given the above, it should be assumed that the primary objective of eco-innovation on the one hand, the environmental benefits and reduction of the negative impact of economic activities on the environment by reducing the energy intensity of consumption of natural resources or reduce emissions of harmful substances on the other (Ottoman et al., 2006). In the literature used a variety of divisions eco-innovation, including among other things for eco-innovation: product, process, organizational and marketing.

- Eco-Product, as a general category of innovation is the introduction of products or services, so that in a better way will be implemented environmental objectives. The main purpose of their introduction is to reduce the consumption of materials throughout the product life cycle (i.e. from its production process, right through to disposal at the end of life). This is made possible by the possibility of product repair, regeneration and use of materials that can be recycled.
- Eco-innovation process associated with improvement or introduction of new production technologies and new devices that serve to mitigate the negative impact on the environment, e.g. to reduce energy consumption through energy-efficient refrigerators.
- Eco-innovation are organizational changes in the company on the company's organization and management, designed for the purpose of increasing awareness and implementation of ecological sustainability, e.g. the implementation of an environmental management system ISO 14000.

- Eco-marketing concern at the introduction of new marketing methods drawing attention to changes in the product or packaging, distribution and promotion with particular emphasis on ecological principles, for example eco-label (Matejun, 2005).

### **3.2 Eco-Innovation Level of Poland against the European Union**

Analysing the state of the Polish economy, it is noted that its economy is largely dependent on other countries. Polish economy is based on coal and agriculture. Businesses are profitable thanks to low costs and low wages, not on the basis of implementing modern solutions. Poland has become an ideal expansion market for western companies, which dominate many industries. Therefore, it is important to move from labour-intensive industries to knowledge-intensive ones. Table 1 shows eco-innovative economies as ranked by the Eco-Innovation Scoreboard (Eco-IS), which measures the relative performance of eco-innovative EU countries to the EU average. Eco-gauge-IS is the basis for the division of European Union countries into three groups, i.e.:

1. eco-innovation leaders, where the value of the index is above 120 (Germany, Luxembourg, Finland, Denmark),
2. advocates of eco-innovation where the index value ranges from 81 to 119,
3. countries catching up on eco-innovation, with the index below 80 (Estonia, Poland, Cyprus, Romania, Malta, Hungary and Bulgaria) (Węgrzyn, 2013).

In 2010, the largest group was the group of countries catching up on eco-innovation (14 countries). In 2011 and 2012, the largest group consisted of supporters of eco-innovation (11 and 12 countries respectively), while in 2013 again the largest group were the countries catching up on eco-innovation (15 countries). In 2016, the largest group was the group advocates of eco-innovation (17 countries) - see table. 2. In that period Poland was classified as belonging to countries catching up on eco-innovation, and it held one of the lowest positions. In 2010 it held 4th place from the end, in 2011 - the last in 2012 and 2013 - the last-but-one. The last year was a little better, because Poland there is very little missing to be in the group of countries of advocates of eco-innovation. Eco-gauge-IS for Poland has significantly deteriorated in the year 2013 (it dropped by as much as 13 points), but the next years have brought about a significant improvement in the situation. Moreover, if compared to the six least innovative countries in Europe, measured by the level of eco-innovation Eco-IS Poland has shown increasing trend in the past four years. However, this does not change the opinion that Poland is one of the least eco-innovative countries in Europe. Also we need to emphasize that Polish economy is far behind the leaders of eco-innovation, as well as those catching up on eco-innovation. Such poor results stem from the weak position of the innovative trend in the country, as well as from small resources devoted to research and development activity. (Rutkowska-Podolowska, Pakulska, 2016).

**Table 1: Eco-Innovation Scoreboard (Eco-IS) 2010-2016**

Country	2010	2011	2012	2013	2014	2015	2016
UE	100	100	100	100	100	100	100
Germany	139	123	120	132	134	129	140
Luxembourg	94	130	108	109	188	124	139
Finland	157	149	150	138	135	140	137
Denmark	155	138	136	129	185	167	126
Sweden	128	142	134	138	123	124	115
United Kingdom	103	105	102	122	100	106	110
Italy	98	90	92	95	99	106	105
Slovenia	75	109	115	74	91	96	104
Austria	131	125	112	106	106	108	104
Czech Republic	73	92	90	71	92	99	100
France	96	99	96	108	112	115	99
Spain	101	128	118	110	136	134	98
Ireland	102	118	113	95	107	106	97
Greece	55	59	67	66	72	72	96
Portugal	72	81	84	79	99	102	95
Netherlands	110	109	111	91	96	98	91
Slovakia	45	53	53	66	71	73	86
Latvia	48	52	54	47	68	72	85
Croatia	0	0	0	57	87	67	81
Belgium	114	115	118	101	96	97	81
Estonia	56	74	78	72	74	80	78
Poland	54	50	54	42	63	59	72
Cyprus	64	71	74	43	59	60	70
Romania	52	67	78	63	76	82	69
Malta	66	82	72	67	57	64	65
Hungary	70	83	73	61	79	81	60
Bulgaria	58	67	80	38	49	49	41

Source: own calculations based on Ranking Innovation Union Scoreboard 2014, [www.database.eco-innovation.eu](http://www.database.eco-innovation.eu) (access: 28.06.2017)

The Eco-Innovation Index shows how well individual Member States perform in different dimensions of eco-innovation compared to the EU average and presents their strengths and weaknesses. The Eco-IS and the Eco-Innovation Index aims to promote a holistic view on economic, environmental and social performance.

#### 4. Conclusion

Eco-innovation is the basis of the new model of development. Each EU country should promote and encourage the introduction of eco-innovative solutions by applying the relevant laws and regulations. Polish results in this area compared to other European Union countries present themselves very badly, because Poland is one of the least eco-innovative countries in Europe. In addition, Polish indicators are not improving but deteriorating. It is an asymmetric relation between public debt and economic growth in the EU countries. Some countries creates closed "circle" consist of Austria, Belgium, Finland. Netherlands, Italy, Spain, Denmark and Sweden (Sulikova, Djukic, Gazda, Kulhanek, 2015).

In the second part of the article we analysed in detail the various groups of indicators and their changes in the analysed period. The group of countries with the highest level of eco-innovation has been quite stable. These are countries with a high level of overall innovation. Hence, it can be assumed that in these countries there is a good system to support innovation, especially ecological. A higher changeability occurs among countries with very low eco-innovation levels. Moreover, the countries which leave the lowest positions on the list, move only a bit higher. These are countries with low overall innovation levels. Therefore it is recommended, in order to improve the situation in those countries, they should follow the leaders' example and apply similar systems to support eco-innovation.

Polish low eco-innovation level is due to an overall low level of innovation in the country and low expenditures on R & D. Low eco-innovation levels also may be linked to structural factors, such as cooperation between science and industry, absorbency of SMEs, or lack of financial incentives for the implementation of eco-innovation. Also, compared to other EU countries and especially the leaders of eco-innovation, Polish companies do not have sufficient capital necessary for the introduction of eco-innovation. This is all the more important as eco-innovations, like innovations in general, are characterized by high costs of implementation, and associated with high risk of failure.

## References

- [1] Bento J. P. C., Szczygiel N., Moutinho V. (2017). Fossil fuel power generation and economic growth in Poland. *Energy Sources, Part B: Economics, Planning, and Policy*, Vol. 12, issue 10, pp. 930-935.
- [2] Bukowski M. and Szpor A. and Śniegocki A. (2012). *Potencjał i bariery polskiej innowacyjności*, IBS, Warszawa, [online]. [cit.2017-09-10]. Available at: [http://www.pi.gov.pl/PARPFFiles/media/\\_multimedia/C447085F017A4547B51F37A08127B160/20120309\\_115644%20Potencjal%20i%20bariery%20polskiej%20innowacyjnosci.pdf](http://www.pi.gov.pl/PARPFFiles/media/_multimedia/C447085F017A4547B51F37A08127B160/20120309_115644%20Potencjal%20i%20bariery%20polskiej%20innowacyjnosci.pdf).
- [3] Carley M., Spapens P. (2000). *Dzielenie się światem*. Instytut na rzecz Ekorozwoju., Białystok-Warszawa.
- [4] Chodyński A. (2003). *Innowacyjność i jakość w strategii rozwoju firmy. Zarządzanie produktowymi innowacjami ekologicznymi*. WSZiM. Sosnowiec.
- [5] Cichy M. J., Szafraniec M. (2015). *Ekoinnowacyjność przedsiębiorstw czystszej produkcji w Polsce. Część 1: Ogólne aspekty ekoinnowacyjności*. Zeszyty Naukowe Politechniki Śląskiej. Seria: Organizacja i Zarządzanie.
- [6] *Competitiveness and Innovation Framework Programme (2007 to 2013)*. Decyzja nr 1639/2006/WE Parlamentu Europejskiego i Rady. 2006-10-24 (Dz. U. UE L z 2006, Nr 310, s. 15).
- [7] *Decyzja NR 1639/2006/WE Parlamentu Europejskiego i Rady z dnia 24 października 2006 r. ustanawiająca Program ramowy na rzecz konkurencyjności i innowacji (2007–2013)*. Dziennik Urzędowy Unii Europejskiej, L 310/15.
- [8] *Działalność innowacyjna przedsiębiorstw 2006-2009*. (2010). GUS. Warszawa.
- [9] EIO (2013). *Europe in transition: Paving the way to a green economy through ecoinnovation. Eco-innovation*. Observatory Founded by the European commission, DG Environment, Brussels.

- [10] *Ekoinnowacje, klucz do przyszłej konkurencyjności Europy*. [online]. [cit 05 Sept 2017]. Available at: [ec.europa.eu/environment/pubs/pdf/factsheets/ecoinnovation/pl.pdf](http://ec.europa.eu/environment/pubs/pdf/factsheets/ecoinnovation/pl.pdf).
- [11] Foltynowicz Z. (2009). *Ekoinnowacje szansą na rozwój*, Ecomanager no 1, [online]. [cit 10 Sept 2017]. Available: <http://e-czytelnia.abrys.pl/ecomanager/2009-1-419/zarzadzanie-4180/ekoinnowacje-szansa-na-rozwoj-9919>.
- [12] James P. (2001). Toward sustainable bussines? M. Charter and U. Tischner (eds.) *Sustainable Solution*. Greenleaf Publishing, Sheffield. [online]. [cit 7 Jan 2017]. Available at: [http://www.eco-innovation.eu/index.php?option=com\\_content&view=article&id=2&Itemid=34](http://www.eco-innovation.eu/index.php?option=com_content&view=article&id=2&Itemid=34).
- [13] Jarża S. (2013). Innowacje w procesach produkcji a środowisko. W. M. Bajdur and J. Kulczycka (eds.). *Innowacje technologiczne procesów produkcyjnych w ochronie środowiska*. Politechnika Częstochowska. Wydział Zarządzania. Częstochowa.
- [14] Kaźmierczak-Piwko M. L. (2012). Determinanty działalności ekoinnowacyjnej przedsiębiorstw, *Zarządzanie i Finanse*. Vol. 10, iss. 1.
- [15] Matejun M. (2009). Zarządzanie innowacjami ekologicznymi we współczesnym przedsiębiorstwie. Grądzki R. and Matejun M. (eds.), *Rozwój zrównoważony - zarządzanie innowacjami ekologicznymi*. Wydawnictwo Media Press. Katedra Podstaw Techniki i Ekologii Przemysłowej PŁ. Łódź.
- [16] Ottman J.A., Strafford E.R., Hartman C.L. (2006). Avoiding green marketing myopia: Ways to improve consumer appeal for environmentally preferable products. *Environment: Science and Policy for Sustainable Development*. Vol. 48.
- [17] Podręcznik Oslo (Manual Oslo) (1997). *Zasady gromadzenia i interpretacji danych dotyczących innowacji. Pomiar działalności naukowej i technicznej*. OECD and Eurostat. Wydanie polskie. Ministerstwo Nauki i Szkolnictwa Wyższego, Warszawa.
- [18] Prystrom J. (2013). Innowacje ekologiczne a ochrona środowiska wobec wyzwań XXI wieku na przykładzie strategii Unii Europejskiej. *Ekonomia a środowisko*. no 1 (44). Białystok.
- [19] *Ranking Innovation Union Scoreboard 2014*, [online]. [cit 11 Sept 2017]. Available at: [www.database.eco-innovation.eu](http://www.database.eco-innovation.eu).
- [20] Rutkowska-Podołowska M., Pakulska J. (2016). Innowacje ekologiczne szansą rozwoju gospodarczego w Polsce. Malara Z. [eds.] *Oblicza innowacji w gospodarce i społeczeństwie*. Oficyna Wydawnicza Politechniki Wrocławskiej. Wrocław. p.158-160.
- [21] Sulikova, V., Djukic, M., Gazda, V., Kulhanek L. (2015) Asymmetric Impact of Public Debt on Economic Growth in Selected EU Countries, *Ekonomicky Casopis*, vol. 63, issue 9, pp. 944-958.
- [22] Szczygiel N., Almeida M., (2017). Housing policies for the elderly: why should we care? *Public Policy & Administration*, Vol. 16, No. 4, pp. 583-592.
- [23] Szpor A., Śniegocki A. (2012). *Ekoinnowacje w Polsce. Stan obecny, bariery rozwoju, możliwości wsparcia*. Instytut Badań Strukturalnych. Warszawa.
- [24] *The Eco-Innovation Scoreboard*. [online]. [cit 11 Sept 2017]. Available at: [www.eco-innovation.eu](http://www.eco-innovation.eu).

- [25] Węgrzyn G. (2013). Ekoinnowacje w Polsce na tle krajów Unii Europejskiej. *Ekonomia i Środowisko*. no 3. p. 138-148.
- [26] Witkowski J. (2008). Instrumenty wspomagające działalność przyjazną środowisku w przedsiębiorstwie. Kowalczewski W. and Matwiejczuk W. (eds.) *Aktualne problemy zarządzania organizacjami*, Difin, Warszawa.
- [27] Woźniak L., Dziedzic S., Ziółkowski B., Stec-Rusiecka J. (2006). Innowacje ekologiczne w rolnictwie i przetwórstwie rolno-spożywczym oraz na obszarach wiejskich. Woźniak L. and Krupa J. and Grzesik J. (eds.) *Innowacje ekologiczne w rozwoju społeczno-gospodarczym*, Wydawnictwo Wyższej Szkoły Informatyki i Zarządzania, Rzeszów.



## Green Entrepreneurship in Chosen EU Countries

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### **Abstract**

*The aim of the article is to present green economy and green entrepreneurship. The green entrepreneurship is a necessary 'tool' to economy development. The article refers green entrepreneurship for the excluded and their influence to the economy of selected European Union countries, including Poland. The aim of the study is to systematize the knowledge of participation green jobs for green entrepreneurship for the excluded. The methodology used is based on an analysis of available domestic and foreign literature and analysis of statistical data. This article refers to the most accepted approaches towards greening economy, which is based on sustainable development concept. The article presents an analysis based on selected definition of green entrepreneurship of possible prevention unemployment in Poland and chosen EU countries (Ireland, Italy and Germany).*

**Keywords:** European integration, green economy, green entrepreneurship, green jobs

**JEL Classification:** F63, O44, Q56, Q57

## **1. Introduction**

Currently, the European Union's Energy and Climate Package obliges all member states to reduce greenhouse gas emissions, increase the share of energy from renewable sources, and increase energy efficiency. Therefore, green jobs are becoming a significant sector of the European economy, which will develop the most rapidly in the upcoming years (Rutkowska-Podołowska et. al., 2016). Green jobs and green entrepreneurship can be indicators of the new upcoming trend of green European integration which aim is to protect natural environment or reduce negative impact of human activity. However, some EU member states have different environmental competitive advantages and economical characteristics (Kasztelan, 2016; Sulikova et.al., 2015). Therefore, the creation of such jobs can be an important tool of the so-called social inclusion (Sulich, 2016) and be recognized as a European integration tool. Creating green jobs and transferring knowledge about green technologies is an opportunity for European Union to solve the problems of inequality and discrimination in the labour market and create a new speed of green, economic development

This article aim is to present most spectacular examples of the green entrepreneurship in chosen EU countries and point to the fact that this successful projects can inspire other member states to launch the own specific projects. The aim of the study is to systematize the knowledge of participation green jobs for green entrepreneurship for the excluded. First the idea of the

green entrepreneurship and green jobs are presented - as the problem formulation, then programmes in chosen countries were characterized - a solution for presented problem. This article assume that creation of green entrepreneurship network can be an attempt not only to protect natural environment but also enhance European integration in its social dimension.

## 2. The Essence of Green Entrepreneurship

In the literature there are many definitions of entrepreneurship, but there is no one unified and widely accepted (Sulich, 2017). The following definition is most relevant to this article, then was accepted as follow „entrepreneurship can be characterized as can be characterized as a socially conditioned process of creating opportunities for creating wealth and their creative use through the use of financial and material resources as well as human and social capital in an innovative way” (Klasik, 2006). Moreover, entrepreneurship refers to public and social activities.

In the scientific literature the environmental entrepreneurship definition was formulated (or green entrepreneurship), as a business activity with positive impact to natural environment. Green Entrepreneurship is just about taking conscious action to address environmental problems. All activities can be simple or more advanced (Ottman et. al., 2006):

- as simple as creating a recycle and reuse policy in the company for materials such as paper, plastic and others,
- as more advanced, as using new techniques that reduce emissions of gases on production or using cleaner energy from renewable sources.

Green (ecological) entrepreneurship is closely related with ecological innovations. Eco-innovation is an entirely new product, which assure values both for the client and business, and it reduces their negative impact on natural environment (James, 2001). The aim of ecological innovations are benefits for environment and reduction of negative impact of business activity on to natural environment. All these goals can be obtained due to energy saving machines, reduction of energy demand by systems and reduction of natural resources usage or reduction of dangerous substances emissions (Ottman et. al., 2006, p.48).

When discussing green entrepreneurship, also green jobs should be mentioned. For the purposes of this article, it was assumed that green jobs “include direct employment which reduces environmental impact, ultimately to levels that are sustainable” (Rutkowska-Podołowska et. al, 2016). This definition includes jobs “that help to reduce the consumption of energy and raw materials, decarbonizes the economy, protect and restore ecosystems and biodiversity and minimize the production of waste and pollution”. It is broader concept of “green jobs”, which might embrace any new job in a sector which as a smaller than average environmental footprint and contributes to improving overall performance, albeit perhaps only marginally” (ILO, 2008).

On the other hand, green businesses are gaining popularity as more opportunities arise for eco-entrepreneurs to invest in. This business is mainly driven by the demand of consumers who are interested in purchasing goods and services that incorporate eco-friendly manufacturing processes. For instance the giant Google has set up a project to create their own energy via renewable sources, like wind and sunlight. They even have a site created to promote the green concept, which you can check over here (Montes [online], 2011).

### 3. Problem Solution

For the purposes of this article it is assumed that entrepreneurship is “the capacity and willingness to develop, organize and manage a business venture along with any of its risks in order to make a profit. The most obvious example of entrepreneurship is the starting of new businesses. In economics, entrepreneurship combined with land, labour, natural resources and capital can produce profit. Entrepreneurial spirit is characterized by innovation and risk-taking, and is an essential part of a nation's ability to succeed in an ever changing and increasingly competitive global marketplace” (BusinessDictionary [online], 2018).

The article presents an analysis based on selected definition of green entrepreneurship of possible prevention unemployment in Poland and chosen EU countries (Ireland, Italy and Germany).

Thanks to the assets from the cohesion budget and the European Social Fund, the Irish government carried out the "Greenworks Ireland" - one year project which turned of 2010. This project was intended entirely dedicated for jobseekers, which could acquire skills in the fields related to natural construction technologies, ecotourism and responsible business. Special trainings covered almost two thousand people in Ireland. Non-governmental organizations were responsible for this programme implementation, including the Ecovillage in Cloughjordan, which brought its educational package to the project. These trainings mainly covered needs of young people and long-term unemployed people who already had some experience in construction and design.. The training objectives were twofold, namely:

- for many jobseekers it was an opportunity to strengthen their qualifications in the field of eco-technologies,
- other people gained new skills to help find the first job.

A large group of project participants were people from disadvantaged backgrounds, disabled people and immigrants. The trainings concerned such areas as: construction and building of houses from natural materials, the design of permaculture gardens (i.e. stable, non-invasive for the environment, agricultural ecosystems), renewable energy sources, or the implementation of sustainable development strategies in enterprises. As the result of the programme, over 16% who completed the courses found employment immediately, another 15% set up their own business, and as many as 17% decided to continue their education, strengthening their qualifications. The systemic approach of the Irish authorities to developing the skills needed for 'green jobs' evokes admiration and recognition. In Poland, this can be an inspiration to undertake and implement this issue was the implementation of social projects.

As part of the Support to the Implementation of Sustainable Development project of the United Nations Development Programme (UNDP) carried out a pilot project of similar design. Together with its partners - the Cohabitate group, pioneers of natural architecture, the Lodz Centre of Sociotherapy and private companies - UNDP showed that also in Poland the green jobs can lead to social inclusion. The Sociotherapy Centre has selected a few teenage boys from dysfunctional backgrounds. Cohabitate architects trained them in natural building, and private companies offered a professional internship, at which they could test the knowledge gained at the workshop. The companies were satisfied and there is a chance that teenagers after leaving the centre will find employment in this sector (Muzińska [online], 2011).

The Green Technology Centre project is a way of counteracting unemployment and support the development of local entrepreneurship using the natural assets of Podlasie region (Poland). This project allows to acquire new qualifications, change the profile of the company or acquire the necessary knowledge in the field of green technologies. As part of the training, participants improved their skills and became enriched with specialist knowledge. Thanks to this, owners

and employees of SMEs are able to increase their competitiveness on the market. An additional benefit is the creation of green jobs by them and the use of green technologies in their business activities which will bring environmental benefits in the form of improving its quality (nf.pl, [online], 2018).

The purpose of another green project, which received financial support from EU funds, under title "Let's get a job. Eco-chance" is combating unemployment and social exclusion through pro-ecological actions (Stańczak [online], 2018). Eco-chance (pol. *Eko-szansa*) is a programme where alternative sources of employment are created, the so-called "green jobs" and sources of income. The training aroused interest not only of representatives of offices, institutions of care, labour office, but also of organizations that aim to help people who cannot cope in life for various reasons, as well as farmers who have become interested in alternative sources of income. It gives an opportunity to social reintegration and increase the potential of people discriminated against or excluded from the labour market, creating alternative forms of employment in centres as well as green jobs for local communities adapted to the needs of this group. The project consists in creating and testing an integrated system of therapy, education and work, related to environmental protection and sustainable development in local communities. The project is implemented in treatment and rehabilitation centres for people addicted to psychoactive substances and infected with HIV. These centres have become a training base for project participants and the place of apprenticeship. The programme was aimed at acquiring skills and knowledge that would enable the return to the labour market. During vocational training, participants received new professions and practical skills acquired during apprenticeships. The effect of the project implementation was (Stańczak [online], 2018):

- creation of a tested model of an integrated therapy, education and work system for use in other facilities,
- created system of professional ecological training (agricultural biodiversity, biomass, hippotherapy and equestrianism, protection of old parks, herbalism, beekeeping, boatbuilding and eco-construction),
- the creation of an internal market for green jobs in centres and the offer of the local labour market will be widened,
- open access to the information society for patients of rehabilitation and re-adaptation centres, local communities and people living with HIV or AIDS in urban environments,
- increased level of beneficiaries' own potential, which will improve their quality of life and facilitate integration in the labour market,
- improved level of social acceptance of people living with HIV or AIDS and people with addictions,
- many good practices in the field of implementing sustainable development in local communities.

The Eco-chance unleashed a willingness to act in many areas and was a real therapy for people treated for drug addiction. The programme helped especially those with scarred psyche, a broken system of values, and inability to experience higher feelings (Stańczak [online], 2018). Another project implemented in Poland was the project under title "Sudetes - a chance for young people". Its goal was sustainable mountain development, acceleration of the process of new development and improvement of existing methods of work, which would give young people new tools and a new approach to problems related to work in these fields, enabling the unemployed to get some funds for starting a business in areas such as: mountain farming, agritourism, regional product (i.e.: production, distribution, EU standards and promotion), hotel industry, regional gastronomy and management, help for women burdened with family

responsibilities in self-employment or in finding alternative sources of income, such as for example craftsmanship artistic jewellery. The project was directed to a group of 300-400 high school graduates and graduates of previous years (up to 35 years old) from 7 high schools with the following profile: agricultural, hotel, catering and tourist from Klodzko Valley and was implemented in 2004-2007. The result of the project was (Ekoprojekty.pl [online], 2018).:

- raising the qualifications of people primarily from villages and small towns,
- involvement of as many as possible citizens of the local community (including beneficiaries) in partnership work in building programmes to solve pressing unemployment problems,
- process orientation and action to improve existing and develop new methods, instruments and approaches to problems,
- inoculation of "good mountains practices" in mountainous regions,
- development of a new teaching model in schools, taking into account the evaluation of the "Graduates 2004 in Aosta" programme and starting the process of adapting the educational model to market needs.

Project titled "Fare impresa sociale nell'ambito delle fonti energetiche rinnovabili" was implemented in Italy. Its purpose was to apply solutions appropriate to the social economy in the renewable energy sector as a response to the problem of exclusion of discriminated people on the labour market and at the same time provide a qualified workforce to this sector of the economy, use experience of the industries traditionally belonging to the social economy in the growing sector of renewable energy as well as the definition of tools and methodologies supporting the social and professional integration of discriminated people (Stańczak [online], 2018). The strategy consists in introducing planned and integrated measures to promote renewable energy sources on the private and public markets as well as in households. The projects were directed to:

- Unemployed - men / women: 33.0% / 33.0%
- Employed - men / women: 17.0% / 17.0%
- Immigrants, ethnic minorities, etc. - men / women: 40.0% / 40.0%
- Non-immigrants and non-refugee refugees - men / women: 10.0% / 10.0%
- Physically handicapped - men / women: 25.0% / 25.0%
- Mentally impaired - men / women: 15.0% / 15.0%
- Patients with mental illness - men / women: 5.0% / 5.0%
- Non-disabled people - men / women: 5.0% / 5.0%
- Addicted people (alcohol, drugs) - men / women: 20.0% / 20.0%
- (Ex) prisoners - men / women: 20.0% / 20.0%
- No specific form of discrimination - men / women: 10.0% / 10.0%
- <25 years - men / women: 15.0% / 15.0%
- 26-50 years old - men / women: 35.0% / 35.0%

The project resulted in a series of trainings during which not only information on renewable energy sources and their application were transferred, but also, the skills of operational activities related to the activities carried out (distance learning instruments were also used). An important effect of the project was undoubtedly the establishment of permanent cooperation with local authorities - as a result of information and promotional activities, numerous city representatives (N=359) contacted the Partnership to join the experiment. The participation of local authorities was very significant and exceeded all expectations. The main innovation of the project concerns the strategic sector selected to create business activities, renewable energy sources. This included the creation of an integrated participation strategy with institutional, entrepreneurial, social and technological participants. Other innovative aspects concern cooperation networks between key private participants, territorial

development pacts, memoranda of understanding, local programming, training paths for specific vocational qualifications (eco-energy manager) in market sectors related to new sources of employment and the use of new technologies.

In Germany, a project called "Ecological Center Öko-Domäne Bobbe", which aim was to implement the tasks of ecological education, social policy and organic farming thanks to the creation of a multifunctional centre with an ecological school. The project was implemented by Öko-Domäne Bobbe, a non-profit organization that runs a multi-purpose centre with an ecological school, and partners and friendly non-governmental organizations. The result of the project is the adaptation of the rooms equipped for thematic activities: grinding grain into flour and baking bread, laboratory testing of water quality. There are also rooms for ceramic works with clay, for weaving wickerwork and a room for self-made paper from recycled paper. Groups of pupils come to the centre for a minimum of 1 day, during which classes are held at the ecological education centre and at the Eco-School. Teachers are pedagogues of general education schools who are delegated to the Eco-School 11 hours a week. Every year, the school is visited by about 5,000 children, and open days are organized, during which whole families and older people are particularly welcome. Owned units: hotel, horse farm, educational centre, eco-school and organic farm (Ekoprojekty.pl [online], 2018).

In Germany, a project called "Ecological Training Centre Lasker Hofe" aim was to integrate various social groups (including - young people, socially excluded and expatriates) - through the constructive educational activities that are possible in the Laser Hofe Center. As part of the project, an ecological reconstruction of an unused kindergarten for a training centre has been planned. The project was implemented by Ökologisches Bildungszentrum Lasker Hofe, which is involved in transferring professional qualifications that allow it to appear on the labour market and is involved in training and advisory activities for both young people and adults. The recipients of the project were people wishing to improve their professional and job-seeking qualifications, youth, socially excluded societies, and expatriates. The project was implemented in 2002-2005. The result of the project is a surface area of 4800 m<sup>2</sup>, ecological reclamation of 2350 m<sup>2</sup>, creation and animation of the training centre activities with a wide range of training to improve professional qualifications - both for young people and adults, and initiation of youth club activities (Ekoprojekty.pl [online], 2018).

#### **4. Conclusion**

The inspiration for many green entrepreneurship programmes were cross national experience exchange and cooperation in this field based on European funding. Although entrepreneurship is commonly associated with establishing a new companies, in this paper it was presented as form of activation of some groups of people endangered by exclusion from labour market.

The social dimension of listed in this article programmes can be recognized as one with the strongest element of European integration. Additionally the programmes are mostly dedicated to establish opportunities for excluded groups of society and to protect natural environment. In fact, most of the services and products being offered today have been greened, although many companies associate Green Entrepreneurship with a high costs. This economic aspects should be a subject of future research of social economy non-profit entities in aspect of jobs on the green economy background case.

## References

- [1] BusinessDictionary (2018). *Entrepreneurship* [online]. [cit. 2018-02-21]. Available at: <http://www.businessdictionary.com/definition/entrepreneurship.html>
- [2] Ekoprojekty.pl (2018). *Ekologiczne centrum szkoleniowe* [online]. [cit. 2018-02-15]. Available at: <http://ekoprojekty.pl/ekologiczne-centrum-szkoleniowe-lasker-hofe/> .
- [3] ILO (2008). *Global challenges for sustainable development: strategies for green jobs*. ILO Background Note G8 Labour and Employment Ministers Conference Niigata, Japan 2008.
- [4] James, P. (2001). Toward sustainable business? In Charter, M. and Tischner, U. (eds.). *Sustainable Solution*. Sheffield: Greenleaf Publishing,.
- [5] Kasztelan, A. (2016). Green Competitiveness of the EU Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 415-424.
- [6] Klasik, A. (2006). *Przedsiębiorczość i konkurencyjność a rozwój regionalny*. Katowice: Wydawnictwo Akademii Ekonomicznej w Katowicach.
- [7] Montes, A. (2011). What is Green Entrepreneurship? [online]. [cit. 2018-02-05]. Available at: <https://www.an-entrepreneur.com/public-content/green-entrepreneurship/what-is-green-entrepreneurship/>.
- [8] Muzińska, A. (2011). Zielone miejsca pracy dla wykluczonych? [online]. [cit. 2018-02-05]. Available at: <http://www.ekonomiaspoleczna.pl/wiadomosc/681905.html>.
- [9] Nf.pl (2018). Ekologia i zielone miejsca pracy są sposobem na bezrobocie. [online]. [cit. 2018-02-15]. Available at: <http://archiwum.nf.pl/37219-ekologia-i-zielone-miejsca-pracy-sa-sposobem-na-bezrobocie/>
- [10] Ottman, J.A., Strafford, E.R. and Hartman, C.L. (2006). Avoiding green marketing myopia: Ways to improve consumer appeal for environmentally preferable products, *Environment: Science and Policy for Sustainable Development*, vol.48.
- [11] Rutkowska-Podołowska, M., Sulich A. and Szczygieł N. (2016). Green jobs. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 822–829.
- [12] Stańczak, I. (2018). *Ekoszansa zachętą do działania* [online]. [cit. 2018-02-05]. Available at: <http://www.to.com.pl/wiadomosci/wyszkow/art/6292442,ekoszansa-zacheta-do-dzialania,id,t.html>
- [13] Sulich, A. (2016). The Young People's Labour Market and Crisis of Integration in European Union. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 926-934.
- [14] Sulich, A. (2017). Future entrepreneurs' expectations based on the example of Wrocław University of Technology students. In Решетникова, К.С. (ed.) *Современный менеджмент: проблемы, гипотезы, исследования. Сборник научных трудов*. Москва: Высшая Школа Экономики Национальный Исследовательский Университет, pp. 81-89.
- [15] Sulikova, V., Djukic, M., Gazda, V. and Kulhanek L. (2015). *Asymmetric Impact of Public Debt on Economic Growth in Selected EU Countries*, *Ekonomicky Casopis*, vol. 63, issue 9, pp. 944-958.

## The Future of EU According to the Slovak Political Parties in the 2016 Elections

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### **Abstract**

*The foreign policy of the Slovak Republic was shortly after its inception in 1993 part of the dispute over the character of the state. Integration into the European Union was a significant political issue. In particular, nationally oriented political parties have at least been reluctant to integrate Slovakia into Euro-Atlantic structures. After the accession of Slovakia to the European Union, this question became irrelevant. However, with the current rise of political extremism, some political forces are proposing Slovakia to leave the European Union. Today's political reality needs to be re-examined also from the point of view of political parties. Parties are still important policy makers despite moods against them. The subject of this conference contribution will be the electoral programs of political parties and movements in the National Council of the Slovak Republic in 2016, for which content analysis will be used. The aim is to determine the degree of Euroscepticism among the relevant political parties in Slovakia.*

**Keywords:** elections program, euroscepticism, integration, political agenda, political parties

**JEL Classification:** H70, H77, N0, O10

### **1. Introduction**

The geographic location of Slovakia was a major geopolitical challenge already in the period of Great Moravia. The mighty empires in the west and east of Europe, with their ups and downs, tried to create a political arrangement in the center of Europe, which would in fact be either a buffer zone or a sort of predisposition for a future attack.

One of the first moments when the political rivalry of East and West in central Europe began in modern understanding was the 9th century. "King Louis the German in 863 forced his rebellious son Carloman to obedience, and Prince Rastislav continued to withstand the attempt of the French rulers to militarily conquer Great Moravia. During the process of christianization, he realized that along with the arriving Frankish clergy, Great Moravia also received cultural, and political influence of the powerful western neighbor." (Čaplovič, 2000) This is why in 862 Rastislav turned to the Byzantine Emperor Michael III., who sent missionaries Cyril and Methodius on the territory of Great Moravia. Their mission had its educational and cultural significance, which is at present emphasized in Slovakia by nationalist associations and Eastward-oriented individuals.

The above-mentioned historical contexts, which are part of the political ethos of Slovakia, partly indicate its relation to the idea of the European Union and the degree of its integration. Of course, *reductio ad absurdum* of this thesis is not useful. However, we would like to use it as a starting point of thinking about what does it mean to say that Slovakia is part of Central Europe and whether Central Europe is so called bridge between the East and the West (more



than 60% of the people agreed with this in the latest opinion poll) or whether it is part of the West (about 25% of people agreed) or it should be part of the East (more than 10% of people agreed).

In 2015, the European Union was hit, especially because of the conflict in Syria, with an event that has been called by the media the migration wave or the migration crisis. This showed a significant difference between the attitudes of top officials of the European Union and leaders of the national states. This migration wave has, among other things, led to linguistic disputes over the different concepts used with migration: "The use of the categories refugee and migrant to differentiate between those on the move and the legitimacy, or otherwise, of their claims to international protection has featured strongly during Europe's migration crisis and has been used to justify policies of exclusion and containment. Drawing on interviews with 215 people who crossed the Mediterranean to Greece in 2015, our paper challenges this categorical fetishism, arguing that the dominant categories fail to capture adequately the complex relationship between political, social and economic drivers of migration or their shifting significance for individuals over time and space."(Crawley, Heaven, Skleparis, Dimitris)

The theme of migration has become one of the key issues in the national parliamentary and presidential elections in the EU Member States over the next few years, as well as of UK referendum on leaving the EU. Slovak elections in March 2016 were no exception. The competing political parties and movements expressed their attitude to Slovakia's membership in the EU under the pressure of the migration wave. The relationship between acting of political parties and the European integration has been noticed by many experts, Tanja Boerzel and Thomas Risse: "Political controversies over the euro crisis have centred predominantly on questions of order, i.e., what constitutes Europe as a community and how much solidarity members of the community owe to each other under which conditions. The mass influx of migrants and refugees changed identity politics, since Eurosceptic populist parties framed the Schengen crisis in terms of borders, advocating for an exclusionary 'fortress Europe'." The theoretical interconnection of issues of political parties and European integration was published by Liesbet Hooghe and Gary Marks: "This article argues that the perforation of national states by immigration, integration and trade may signify a critical juncture in the political development of Europe no less consequential for political parties and party systems than the previous junctures that Lipset and Rokkan detect in their classic article"

On the political map of the European Union, an association of V4 countries emerged, and it was characterized by a negative attitude towards migration. "Migration is a phenomenon, which is relative to Slovakia not only because Slovakia is a part of the European Union or V4, and is also a bordering country, but also because its territory was heavily influenced by migration. Migrants entering into the V4 countries do not always use the legal process and mostly they enter illegally. The severity of irregular migration is the result of not only its range, but also of its links with organized crime and the associated security risks, including terrorism." (Horvát, 2016)

After the parliamentary elections of 2016, eight political parties reached parliament. We will further analyze their electoral programs in the article with chapters divided according to the criteria for participation in the current executive.

## **2. Governing Political Parties**

The parliamentary elections in 2016 took place after four years of government of one party - Smer - Social Democracy. The development of its voting preferences between 2012 and 2016 had a steadily declining trend. Therefore, it was generally expected that the coalition

government would emerge after the elections. Smer-SD as the winner of the election 2016 eventually put the government together with three other political subjects.

### **2.1 Smer – Social Democracy**

Slovak Social Democrats, who have been operating under the Direction - Social Democracy brand since the integration of the left side of Slovak political spectrum between 2002 and 2004, have always had a constant and specific attitude towards the European Union. Already at the time of the first parliamentary elections in 2002, in which Direction took part as the "Third Way", when its leaders preferred ideological pragmatism, through its large-scale advertising, its attitude to the ongoing integration into Western political structures was expressed by the slogan "Into the European Union ... but not with bare asses!". A year later, at the time of the referendum on the accession of Slovakia to the European Union, Direction officially participated in a campaign to promote entry, but "... on the basis of the April survey of UVVM at the Statistical Office of the SR it could be assumed that higher risk groups "(Veľšic, 2003) may be especially "younger age groups; both skilled and unqualified workers; inhabitants of small and medium-sized towns; inhabitants of Žilina Region and Banská Bystrica Region; sympathizers of the Smer, the HZDS or people who did not sympathize with any party." The higher risk groups in this context were perceived the voters who might not participate in the referendum or vote against membership in the EU.

In spite of a weaker pro-European orientation, the Smer - Social Democracy has become a member of the European Socialist Party as well as of the Socialist International. After the 2006 parliamentary elections, when social democrats created the government with the nationalist Slovak National Party (SNS) and the populist Movement for Democratic Slovakia (HZDS), Direction was temporarily suspended from the Party of European Socialists. It was another example of the fact that domestic politics and moods are a political priority for the Smer - Social Democracy over the relationship with the EU. This is also confirmed by the electoral program drafted in 2005, in which the European Union is mentioned out of 29 pages only at the final 14-lines: "Smer - Social Democracy considers foreign policy as one of the basic instruments of promoting national interests. It supports Slovakia's active involvement in European political and economic as well as transatlantic structures, as Slovakia is an integral part of Europe. There has been a lot of success in foreign policy, but on the other hand, Slovakia has lost a lot, for example when meeting the conditions for joining the EU, when Slovak diplomacy did not negotiate the optimal conditions."(SMEROM K ĽUĎOM Volebný program SMER – sociálna demokracia, 2005)

Thusly defined political line of Direction-SD towards the EU has not changed in any significant way in recent years. An equally ambivalent attitude has the Direction also taken on the financial problems of Greece and the creation of European Stability Mechanism in the period 2010-2012 as well as on the aforementioned migration crisis. The Slovak Socialists did not present any larger electoral program before the elections to the National Council of the SR 2016, merely several basic electoral theses, among which was a statement that "Smer - Social Democracy fundamentally refuses any attempts to force sovereign Slovakia into placing migrants on its territory. Smer - Social Democracy is ready to accept, on the principle of solidarity, financial, personnel and technical measures to protect the Schengen external borders from illegal migration." (www.strana-smer.sk, Cieľ účasti vo vláde, quot. 14. 2. 2018)

### **2.2 Slovak National Party (SNS)**

The Slovak National Party represents the oldest "brand" in the history of the political life of Slovaks. The party is proclaiming its history to go back to the 1870s, but it has to be said that

this is not an unambiguous historical continuity. Originally, it was a confessionally-oriented political party of the Slovak Protestants. For some time, at the turn of the 19th and 20th century, it had interconfessional character across the social strata and tried to act as a representative of Slovak cause in Hungarian political life. However, its influence was slowly weakened by natural political stratification, especially with the arrival of the first Czechoslovak Republic. During this period, the SNS became a small political party, which was a minor political partner, especially for the Hlinka's Slovak People's Party, which eventually absorbed it after 1938. The SNS had a similar political relevance after 1989, when it was mostly a coalition or opposition partner of populist parties, often using the potential of national and social populism. The top of its political agenda was the critique of the Roma issue, to which it has not produced any conceptual solution throughout its modern existence.

The relationship of the SNS to the European Union can be perceived on the same mental and intellectual level as the West and East was perceived by the representatives of this party in the 19th century. When the SNS emerged among other as a part of the intellectual legacy of the group around Ludovít Štúr which was expecting the national revival of the Slovaks with the help of the Czarist Russia and were skeptical to the West. The SNS retains similar thinking in the 21st century. Currently, the SNS's view on the EU is well illustrated by a party document entitled "Requests of Slovak Patriots towards Brussels" where the SNS complained, inter alia, "about permanently circumscribing the powers of the national parliaments, about loss of independence and about manipulating changes in the electoral system into the European Parliament. We express our dissatisfaction with the current stagnation of the European Union and its inability to respond to emerging and growing problems." In the Košice program theses for Slovakia of 2015, the words European Union are not even present.

### **2.3 Most-Híd**

Political party Bridge represents on the current political map of Slovakia a hybrid of ethnic and civic political party. It was formed in 2009 due to personal disputes in the Party of the Hungarian Coalition, which was for the previous decade the political representative of the Hungarian minority and was part of two coalition governments.

Bridge, with its storyline starting in the SMK environment, has a certain personal and organizational basis, which may lead to its characterization as a de facto ethnic party, but it must be added to its political profile that it deliberately focuses more on the civic issues, which also allows it to address Slovak voters. Its personal strategy is similar, resulting in the fact that Slovaks are deliberately also among its representatives.

The above-mentioned circumstances indicate that Most-Híd belongs among pro-European forces. Partially because it is a minority representative, this party is aware of the importance of human rights and freedoms as a political agenda. Currently, Bridge is self-proclaimed political force based on the position of the civic party, which means tolerant, respecting and protecting human rights and the pro-European orientation of the country and based on the position of its program Civil Vision. It continues to strengthen its core pillars: building and developing the rule of law institutions, developing regions and protecting minorities by strengthening the civil society principles. These three pillars were also the basis of the election campaign of the 2016 parliamentary elections. Bridge takes the support and sympathies of citizens as the support for these ideas. As a result, since the end of 2017, three expert-political cabinets exist - For the Rule of Law, under the leadership of Lucia Žitňanská; For Regional Development, under László Sólymos; and For the Protection of Minorities and the Development of Civil Society, under Ábel Ravasz.

Bridge offered an electoral program called Civil Vision for the elections to the National Council of the Slovak Republic 2016. It was an extensive document, divided into 12 main thematic chapters. The issue of Europeanness is the subject of the eleventh chapter called Foreign and Security Policy. Bridge has an abstract but positive approach towards the European Union: "The creation and existence of a strong and competent European Union that accepts regional and cultural diversity is of primary interest to Slovakia. That is why it is extremely important for every Slovak government to actively, and in the position of a partner, support the work of the European Council and the European Commission to support by its own proposals and initiatives strengthening of the EU's global position, increasing of the competitiveness of its economy and contributing to strengthening of EU security." (Občianska vízia, 2016) Overall, this part of the program is highly open to the world abroad. Apart from the obvious interest in good neighborly relations with Hungary, Bridge wanted, for example, to support the military activities of the French Republic or the military presence of Great Britain in Central Europe. On the contrary, Bridge identified the current Russian foreign policy as hostile.

## **2.4 Siet'**

The last political party that became part of the ruling coalition after the 2016 parliamentary election was Siet'. Its short and stormy political story had beginnings in the presidential election in 2014. Radoslav Procházka, the later founder and first chairman of Network was one of the more successful presidential candidates. If in Slovak political life after 1989 it was true that the fate of Slovak political parties is related to the rise and fall of their leaders, the fate of Siet' party fully confirms this.

Radoslav Procházka formally began his political activity in 2010 with Daniel Lipšic as a member of the Christian Democratic Movement (KDH) and its deputy in the National Council. After the fall of the government of Iveta Radičová in 2011, the early 2012 parliamentary elections and after the departure of Daniel Lipšic from KDH a year later, he at first pretended to be interested in cooperating on the creation of a new conservative-liberal entity to replace the so-called old right. Instead, he eventually preferred to candidate to the President of the Slovak Republic and subsequently transformed the public support and personnel equipment to establish his own political party Siet'.

Prior to the election, Siet' issued an electoral program specified to a number of policy areas, but it lacked expression on foreign and European policy. The actual foreign policy orientation of this now-defunct political party is therefore questionable. It is only partially reconstructable through interpretations of its representatives, but we do not consider it relevant for the professional purposes of this conference contribution.

## **3. Opposition Political Parties**

The results of all parliamentary elections after 1989 brought new political parties to the Slovak Parliament. In 2010, the five per cent limit exceeded the protest parties. In 2016, the situation was so high that parliamentary representation was also acquired by the fascist Kotleba ĽS-NS.

### **3.1 Sloboda a Solidarita (SaS)**

In 2009, similar to Most-Híd, the new liberal political party Sloboda a Solidarita, also emerged. Its key program element was economic liberalism. Its first and yet only Chairman, Richard Sulík, tried, prior to establishing the SaS, to publicly promote the so-called tax bonus that represents a major change in the social system in Slovakia.

Since spring 2009, activity of SaS has been based on the entry of public figures from the media and business world into the party. This, combined with modern marketing has helped it to gain an interesting result in the European Parliament elections. Subsequently it was successful in the 2009 regional elections, and with continuous and intensive political work until the 2010 parliamentary elections it became the third strongest political party in Slovakia and the second strongest government party in the cabinet of Iveta Radičová.

In relation to the European Union, SaS originally behaved as a so-called Eurorealist party. It considered the EU a good but too bureaucratic political project. At the time of the Greek financial crisis, which arose before the 2010 parliamentary elections, SaS clearly opposed Greece's European financial assistance, which helped its electoral result in the parliament.

Meanwhile, the European Stability Mechanism, which was to be approved by the national parliaments of euro area countries, was proposed at the European level to solve the Greek financial crisis. This was the formal reason for the fall of the government of Iveta Radičová, which combined the vote on the European Stability Mechanism with vote of confidence to the government. In addition to voting against the European Stability Mechanism, SaS members also voted against the government their party was part of. Consequently, the result of the early parliamentary elections in 2012 showed that this political tactic cost SaS nearly 2/3 of voter support compared to 2010 and the party actually only narrowly made to the parliament.

The SaS electoral program in the parliamentary elections 2016 mentioned the European agenda in the eleventh part of the program, which states: "Slovakia, together with other European countries, faces several crises. The debt crisis and the refugee crisis, linked to new security threats in Eastern Europe, are affecting the entire continent. These are linked to further dangerous increase in nationalism and populism. More and more European Union (EU) residents are starting to reject it as a failing institution. It is necessary to adapt our foreign and political activities in terms of being better partners and allies." (Volebný program SaS, 2016) About the incomplete decade of SaS, it can be said that in its political life, the key ups and downs have been linked to the European Union so far. Although the SaS reflects on fundamental issues that are strongly perceived by public opinion, Slovak liberals are in fact not sufficiently constructive in proposing and enacting the solutions. Other than the blunt refusal of the European Stability Mechanism in 2011 and of the migration quotas in 2015, they did not actually offer any practical solutions. The party, which initially inspired by its program, is now more about latent xenophobia and mitigating populism.

### **3.2 Obyčajní ľudia a nezávislé osobnosti (OĽaNO)**

Political movement Obyčajní ľudia a nezávislé osobnosti is a highly specific political entity. Its specificity can be shown on two circumstances: 1. OĽaNO defining itself as a confessional-conservative political party had its beginnings in liberal Freedom and Solidarity. Its four original members became MPs in 2010, but their interest in creating their own political party was evident already at the time when they accepted the offer to candidate for liberals. 2. According to the standard criteria of the theory of political parties OĽaNO is not a political party because it does not have a membership base. The absence of members (only 4, nor 12,

members simply do not constitute a political party) relates both to the past as to its future. The party chairman Igor Matovič keeps saying about himself that he is not a professional politician, and OĽaNO is not a classic political party.

Given the very unusual or informal nature of the party activity, the ideological and programmatic evaluation of the party is more complicated. Although the relationship of this movement to European integration can be identified from electoral programs or statements of its deputies, it is a ideologically broad movement and the number of cases in which OĽaNO expressed opinions in European issues inspires us to be analytically reserved.

Based on what it revealed about its European identity, it can be said that in the field of European politics, the OĽaNO is a "twin" of the liberal SaS. Its most recent electoral program states in its core: "The European Union project is weakened equally in relation to citizens and to national parliaments. In the solutions offered to solve Eurozone crisis since 2008, political leaders have mostly communicated using the financial vocabulary instead of highlighting the Union's political and value base. The popular trick was - and remains - to blame every mistake on Brussels. Large political parties are discredited in many countries, citizens remain dissatisfied and apathetic to democratic institutions. The unprecedented wave of populist and radical parties that have gained influence in the new European Parliament and strengthen their positions in several member states is the unfortunate result." (Zahraničná politika, Náš program pre Slovensko, hnutie OĽaNO)

### **3.3 Boris Kollár – Sme Rodina**

The interesting environment of the Slovak political parties concludes with another non-standard movement, which is represented by the tabloid celebrity and entrepreneur Boris Kollár. Political movement Boris Kollár – Sme rodina was created three months before the parliamentary elections of 2016. One of the co-founders was Milan Krajniak, whose political history ran to the beginnings of the Civic Democratic Youth and later to the Christian Democratic Movement, where he took care of political marketing.

After two years of existence of this movement, it can be described as a confessional-conservative and at the same time a protest party. Its predominant political themes are, in particular, the socio-economic problems of the population, aiming at people in poverty and low-income populations.

The program of the movement Boris Kollár – Smer rodina is dedicated to the aforementioned areas, and neither foreign nor European politics is concerning it. Its relationship to these issues can be partially expected according to ad hoc expressions on European issues. Publicly known were declarations of some of the representatives of the Sme rodina movement on migration, which was also the defining topic of the 2016 parliamentary elections.

### **3.4 Kotleba – Eudová Strana Naše Slovensko (Kotleba – ES NS)**

The performance of Smer – Social Democracy, the sole governmental political party between 2012 and 2016, which emerged from the democratic elections, aiming to advance social stability, combined with the 2015 migration crisis, were the strongest influences on the result of the 2016 parliamentary elections. Support was gained by not one, but several protest-oriented political parties. And for the first time in the democratic history the far-right political party of Marián Kotleba was one of them.

Its relationship to the European Union, but also to NATO and towards the West as a whole, is openly negative. The European Union, from ĽS NS's perspective, represents a form of slavery for Slovakia, and NATO is an aggressive military pact. Such assessment in its logical succession is leading ĽS NS to a simple conclusion - leaving both organizations. The far right-wing movement confirmed this in its electoral program 2016: " The ban on the production of classical light bulbs or mercury thermometers is just a small example of what Brussels is dictating to us all. As a result of this bullying, hundreds of Slovak companies have disappeared. Today we buy many products from abroad and overpriced. Bureaucrats try to silence the critic voices about European Union using children stories about European funds." (10 BODOV ZA NAŠE SLOVENSKO! Volebný program politickej strany).

The party also presented these electoral declarations as a parliamentary entity when in the summer of 2016 it launched a public petition for a referendum on leaving the EU and NATO. In almost two years, however, it was unable to initiate the referendum by a sufficient collection of signatures.

#### 4. Conclusion

The relationship of the Slovak public to the European Union is historically determined by political experience beginning in the Great Moravia. Cyril and Methodius were part of the geopolitical pressure of the political influence of the West and East in Central Europe. In the following centuries, Slovakia was part of the Habsburg monarchy, which had to cope with foreign policy of Western countries as well as the growing power of Russia since the 18th century. The existence of Czechoslovakia was even more marked by the clash of the West and the East.

In modern history after 1993, Slovakia's foreign policy was oriented towards accession to the European Union and NATO - thus integration into Western political, economic and defense communities. A key Slovak political decision on integration was made in the 1998 elections to the National Council of the Slovak Republic, when the government was taken over by primarily pro-Western orientated political parties. Similarly, pro-Western political entities prevailed in the 1998 to 2010 parliaments.

However, since 2010 the influence of the new political parties with protest and anti-system appeals has grown. After analyzing the electoral programs of the political parties and movements represented in the National Council after the 2016 elections, it can be concluded that pro-European political parties are represented only in the ruling coalition. The relationship towards European idea among the opposition parties is either rather neutral or openly negative. Therefore, it is hypothetically possible to assume that, if after the next parliamentary elections, political parties from the current opposition will be present, the future executive will be less pro-European. Consequently, this may affect the map of the future so-called European core.

#### References

- [1] Boerzel, T. A. and Risse, T. (2017) *From the euro to the Schengen crises: European integration theories, politicization, and identity politics*. [online]. [cit.2018-02-28]. Available at: <https://www.tandfonline.com/doi/abs/10.1080/13501763.2017.1310281>
- [2] Crawley, H and Skleparis, D. (2017) *Refugees, migrants, neither, both: categorical fetishism and the politics of bounding in Europe's "migration crisis"*. [online].

- [cit.2018-02-28]. Available at:  
<https://www.tandfonline.com/doi/abs/10.1080/1369183X.2017.1348224>
- [3] Čaplovič, D. (2000). *Dejiny Slovenska*. Bratislava: Academic Electronic Press
- [4] Hooghe, L. and Marks, G. (2017) *Cleavage theory meets Europe's crises: Lipset, Rokkan, and the transnational cleavage*. [online]. [cit.2018-02-28]. Available at:  
<https://www.tandfonline.com/doi/abs/10.1080/13501763.2017.1310279>
- [5] Horvát, P. (2016) Migration Policy – the Link Between the Visegrad Group, Countries and the European Union. International Conference on European Integration 2016. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 368–375.
- [6] Slovenská národná strana (2013) *Popradské memorandum*
- [7] SMEROM K ĽUĎOM (2005) *Volebný program SMER – sociálna demokracia*. [online]. [cit.2018-02-28]. Available at: [www.humanisti.sk](http://www.humanisti.sk)
- [8] Smer-SD (2016). *Cieľ účasti vo vláde* [online]. [cit.2018-02-28]. Available at: <http://strana-smer.sk>
- [9] Velčic, M. (2003) *Nízka účasť na referende o vstupe SR do EÚ – príčiny a súvislosti*. [online]. [cit.2018-02-28]. Available at: <https://euractiv.sk>
- [10] Volebný program hnutia Obyčajní ľudia a nezávislé osobnosti (2016) *Náš program pre Slovensko* [online]. [cit.2018-02-28]. Available at: <http://www.obycajniludia.sk/program/>
- [11] Volebný program strany Kotleba – Ľudová strana Naše Slovensko (2016) *10 BODOV ZA NAŠE SLOVENSKO! Volebný program politickej strany* [online]. [cit.2018-02-28]. Available at: <http://www.naseslovensko.net>
- [12] Volebný program strany Most-Híd (2016) *Občianska vízia* [online]. [cit.2018-02-28]. Available at: <http://most-hid.sk>
- [13] Volebný program strany Sloboda a Solidarita (2016) *Agenda 2020* [online]. [cit.2018-02-28]. Available at: <http://www.sas.sk/program/16>



# The EU Internal Market Regulation Through the Innovation Principle Perspective

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## **Abstract**

*The Internal Market is a basic stone on which the building of the European Union stands. In recent years an emphasis on innovation as a way how to boost the EU competitiveness activated the process of simplifying the Union legal framework to make the Internal Market regulation more business-friendly. As a result, innovation principle represents a new approach how to strengthen “better regulation“ in the EU legislation. Any new or revised piece of legislation should be analyzed from its impact on innovations’ perspective. Both, the very close relation with the EU “better regulation“ approach and the innovation principle, should bring economic and social advantages and positive impacts into all of the EU common policies, including the Internal Market. This paper aims to illustrate different modalities, current state of play and to find the best way for its application within the business sector.*

**Keywords:** *better regulation, business sector, innovation principle, legislation, Internal Market*

**JEL Classification:** *D81, F15, K30*

## **1. Introduction**

In 2018 we celebrate the 25<sup>th</sup> anniversary of the creation of the EU Internal Market where free movement of persons, goods, services and capital is guaranteed. The EU Internal Market is probably the most visible success of the European integration. Today EU citizens take advantages given by the four EU Internal Market freedoms to move and live, study, work or do business anywhere within the EU as a common standard. Implementation of the four Internal Market freedoms among other benefits expanded labour mobility, stimulated trade, investments and reduced price differences. Common public procurement or competition rules encourage the entrepreneurial activity of all levels, including SMEs. Especially business sector benefited from lower trade costs, access to cross-border investment and innovation capacity for its further expansion and particularly decreasing of administrative obstacles, cultural barriers or regulatory diversity. But still, more work must be done to complete the Internal Market and adapt to new market realities such as globalization, new technologies and changing business models. At the same time, to render Internal Market more efficient, it is necessary to prevent the creation of new barriers to trade and investment.

Making the Union economy stronger and more competitive was one of the targets endorsed by the EU2020 Strategy (European Commission, 2010) where new approach to innovation policy was explicitly mentioned as the basic precondition for future EU economic growth, attractive place for investment and education and research opportunities. As a part of the smart industry concept an Innovation Principle was put into the center of this strategy.

## 2. Innovation Principle and its Definition

Innovation, coming from the Latin word *innovare* (“to restore”), means “the most important driver of growth..., [which] create[s] conditions in which investors, managers, and entrepreneurs are encouraged to take risks and hence create new sources of wealth and work” (ERF, 2015, p. 3). In a hand with accelerated social and technological development, innovation became an integral part of everyday life and changed the face of world significantly, in spite of the fact that not all inventions had a positive impact on humankind.

Innovation is one of the conditions required for sustainable economic growth in the European Union (Devlin, 2015, chapter 1). Despite the lack of a straightforward relationship between innovation and the regulatory framework, it is evident, however, that regulatory framework favourable to innovation is not only desirable but important. To support and develop innovation effectively, other measures including administrative, tax or investment planning should also be a part of the same direction as legislative measures. The Union legislation should aim to create a vital legal framework that enables businesses and citizens to benefit from the advantages of the Internal Market and to eliminate administrative burden. These premises inspired and stimulated the Commission to open the discussion about better regulation and future proof legislation.

The innovation principle is in general defined in Article 3 Treaty on European Union (TEU) where the EU obligation to promote scientific and technological advance is laid down in the context of industry policy. In Article 173 Treaty of the Functioning of the European Union (TFEU) innovation is explicitly mentioned as one of the pre-conditions of open and competitive markets in the same line with research and technological development. Article 179 TFEU also includes innovation when setting tasks for European research area by strengthening the scientific and technological bases as the way how to encourage Union, including its industry, to become more competitive.

As far as the innovation principle is concerned, the EU Charter of Fundamental Rights also has its place in relation to innovation, especially when the freedom of science (Article 13), freedom to choose an occupation and the right to engage to work (Article 15) and right to property, including intellectual (Article 17), of any individual has to be taken into account.

The innovation principle should be balanced with other basic principles arising from the TFEU. In this regard, environmental protection and especially the precautionary principle (Grmelová, 2016) plays the key role as we cannot deny that newly innovated technology or product would not harm human health or environment. Therefore, risk management and impact assessments should take their place in the process of qualification and quantification of possible costs and benefits arising from the (general) usage of innovated technology or product. It is evident that also consumer protection principle as defined in Article 12 TFEU should be taken into account, as it has as one of general principles, its influence on other Union policies and activities during the implementation phase of any Union policy. Finding the right balance will be, without any doubts, not an easy process and will require deep analysis and expert-based discussion. The set of instruments for supporting innovations is quite wide and covers principles of harmonization and mutual recognition, common standards and searching for alternatives, flexibility in relation to expected effects, right for exemptions, exchange of experience and sharing of best practices as well as other ways for promoting the Innovation Principle.

### **3. Better Regulation Agenda and the REFIT Platform**

Regulation can stimulate or act as barrier to innovation. As response to concerns about boosting regulation at the Union level, the European Commission has in recent years started to simplify the Union legal framework. The number of directives was reduced significantly in each area and New Legislative Framework for products also entailed reducing burdens on businesses in many fields (which together compose the EU Internal Market).

At the end of 2012 the Regulatory Fitness and Performance Programme (REFIT) was initiated and according to European Commission's own words this programme expresses "the Commission's ongoing commitment to a simple, clear, stable and predictable regulatory framework for businesses, workers and citizens". According to its intention the European Commission continued to apply measures which should simplify regimes for small and medium-sized enterprises (SMEs) and allow to apply exemptions or lighter regimes for micro-enterprises (e.g. fees for certain types of registration and permits in the sphere of chemicals, health protection and consumers' protection were reduced for micro-enterprises). The European Commission's target to achieve a vital and effective legal framework in full respect of the up-coming challenges led to a new legislative package which was presented by the European Commission on 19 May 2015 as a Better Regulation Package.

The Better Regulation Package consists of three legislative proposals, a set of inner instruments to facilitate better regulation, that was published together with the umbrella Communication called "Better Regulation for better results, an EU agenda" (European Commission, 2015a). Legislative proposals included a decision on the creation of the platform of Regulatory Fitness and Performance Programme (REFIT), a decision on the creation of an independent Regulatory Scrutiny Board and also a draft of a new Inter-Institutional Agreement on Better Law Making as an integral part of the package as well as new guidelines for impact assessments. The new Inter-Institutional Agreement (IIA) aims to simplify the Union regulatory environment, eliminate administrative burden and make the newly created Union legislation more effective and concentrated on spheres with the highest European added value. These goals should be - according to the proposal - achieved by the enhanced consultations and impacts assessments during the whole Union legislative process. However, critics of an excessive stress on impacts assessments (including the European Court of Auditors) claim that impact assessments do not constitute an exhaustive tool to improve the quality of EU legislation since "the amount of EU legislation that shall be enforced in 28 Member States renders any exhaustive study of the potential impacts impossible (Miscenic, Racciah, 2016, pp. 16-17)".

The European Commission took an obligation to explain more precisely what opinions stakeholders have and especially what impacts (environmental, social, economic) on competitiveness of SMEs are expected (the process on how impact assessments come into existence is described in van den Abelee, 2014, pp. 7-17). At the same time, each impact assessment should also contain a better justification in relation to the principles of proportionality and subsidiarity. To achieve this a new "Task Force on Subsidiarity, Proportionality and "Doing Less More Efficiently"" was created in November 2017 and it should help the European Commission to make recommendations on how to better apply the principles of subsidiarity and proportionality, to identify policy areas where work could be re-delegated or definitely returned to the national level of the EU Member States and to find ways to better involve regional and local authorities in EU policy-making and delivery (European Commission, 2018a). The Task Force has started its work in January 2018, consists of 9 members representing national parliaments, Committee of the Regions and the European Parliament. The Task Force is chaired by Frans Timmermans, European Commission First

Vice-President in charge of Better Regulation, Interinstitutional Relations, the Rule of Law and the Charter of Fundamental Rights. Interested parties are invited to comment on the working papers related to these topics. Results of the Task Force activities should be presented in July 2018 in a report addressed to the European Commission President Jean-Claude Juncker.

#### **4. The SME Test**

To make the work of screening and evaluation of the Union legislation unified and better concentrated on main problems the European Commission – according to the New Better Regulation Guidelines (European Commission, 2017a) - has developed a methodology covering a set of the most important aspects which becomes known as the Commission’s Better Regulation Toolbox (European Commission, 2018b - the toolbox is structured into 8 chapters and includes 59 individual tools covering all relevant aspects.). The Council of the European Union in its Competitiveness formation called on the European Commission to develop reduction targets specially taking into account the specific situation of SMEs. Therefore, the European Commission started to apply the “Think Small First“ principle when preparing new initiatives (as stated in its Better Regulation Package). Using such principle to make the legislation “more SMEs-friendly“ the Commission has developed the co-called SME Test. The SME Test requires that each of legislation proposals is checked for its compatibility with the needs and specificities of SMEs. The SME Test became part of the Commission Toolbox and its four defined points must be reflected in the Impact Assessment. The four points comprise (1) consultations of SMEs stakeholders, (2) identification of affected businesses, (3) measurement of the impact on SMEs and (4) assessment of alternative mechanisms and mitigating measures which cover other important areas, e.g. necessity of longer transitional period, reduced reporting requirements, reduced fees, simplified inspections regimes, risk-based approach and others. As mentioned above, the work still continues via inter-institutional discussion. In the up-coming period attention to broader use of digital tools would be possibly paid in the discussion and consultations with stakeholders.

#### **5. “Innovation Deals” and European Innovation Council**

The Internal Market Strategy includes specific focus on SMEs and start-ups in many of its initiatives, the Better Regulation Agenda is also aimed at the creation of more research and innovation friendly regulatory environment that can fluently adapt to new technologies and new forms of innovation, including the application of the Innovation Principle. Besides the EU2020 Strategy, the Horizon 2020 actively supports SMEs within the research policy field by providing direct financial support and indirect support concentrated mostly on support to research and innovation projects and the creation of favourable system for SME innovation and growth. From this point of view, an essential part of the discussion is constant support for start-ups and scales-ups where the EU as whole has reserves to be stimulated and used. Scholars investigating the impact of EU’s investment into research and development note, however, that “Europe is still far from achieving its full potential and has to overcome many impediments and barriers (Gretcherman, Schepers, 2016, p. 5).” Therefore, EU stakeholders “call for further simplification of application requirements, elimination of thematic restrictions and improvements in the evaluation process to allow for more bottom-up support for innovation. In addition, calls are heard for easier access to scientific information, embedding SMEs in knowledge exchange networks and increasing workforce skills to exploit innovations from elsewhere” (non-paper of the Slovak Presidency, 2016). Extensive discussion on the way how to improve the EU research and innovation system is underway and is currently closely linked to the newest European Commission’s initiative on start-ups and scale-ups (European

Commission, 2016a) and follows the Internal Market Strategy targets to create opportunities for consumers and businesses and, helping SMEs and start-ups to grow by removing barriers for start-ups to scale-ups in the Internal Market, creating better opportunities for partnership, commercial opportunities and skills and facilitating the access to finance.

Within the preparation of the mid-term review of the Horizon 2020 Programme, an idea of the European Innovation Council has appeared in the Commissioner Moedas's concept and is currently promoted by the European Commission as a platform from which the SMEs would benefit in any case (European Commission, 2016b). For the reasons already mentioned, the European Commission elaborated the new non-legislative approach called "Innovation Deals". The aim is to enable innovators and regulators to reach a joint understanding of how new technologies and innovations can be progressed in existing regulatory frameworks (European Commission, 2016b, preface, p. 3). The main idea of Innovation Deals is that it is not an approach to support 'normal' business activities but would be restricted to innovative initiatives that have only a recent and limited or even no access to the market with the potential of wide applicability. Through involvement of the European Commission and the relevant Member States authorities, together with stakeholders, Innovation Deals would seek to find ways to avoid potential innovation barriers arising from existing EU law or Member States implementation. The EU Member State authorities should monitor Innovation Deals realization according to national schemes (European Commission, 2016b, p. 12). The European Commission also announced (European Commission, 2015b) that such a new approach of Innovation Deals will be more precisely developed in the area of Circular Economy (European Commission, in the field of wastewater treatment, signed in April 2017). As it has expected effects, the Innovation Deals concept was extended into another area – on 12 March 2018 the second Innovation Deal in the area of electric vehicles was signed (European Commission, 2018c).

Another part of the same approach represents an intention to create a new body called European Innovation Council which should become a vehicle of further development by creating an integrated framework for the EU innovation in order to fully exploit Union's innovation capacity. In this regard, a European Association of Research and Technology Organisations (EARTO) study was presented in April 2016 (EARTO, 2016). EARTO identified three key priorities, such as the necessity of clarification of innovation targets among existing EU instruments, efficient using of available network infrastructure for further support of innovations and scale-ups and last, but not least, exploration of collaborative models in which the sufficient supporting instruments, including financial, would launch the innovative research-driven companies. Based on its study EARTO urged the European Innovation Council to manage smart and efficient use of EU funds (ESIF, EFSI) for innovation and to develop closer partnerships with the different programmes existing at the national or regional levels of Member States to reach the optimal results (EARTO, 2016, p. 4).

Also, the Council of the European Union takes its part of responsibility in this field. Alternatives and different approaches, searching for new ways for enhancing cooperation and reducing burdens within the Internal Market is a regular point at the agenda of its meetings. The Council of the European Union understands that the future of the Union depends on its ability to innovate and in such context it is vitally necessary to settle an environment ready to react to fast-changing world and to allow the SMEs to take their part in challenges the situation brings (European Commission, 2015c). Therefore, the discussion about better understanding the relationship between research and innovation, entrepreneurs, and economic development is currently on the table as well, including open access to necessary information, promotion of research and innovation novelties. The last formal and informal Competitiveness Council meetings were dedicated to opportunities the Internal Market opens for EU companies and

improvements the framework conditions for doing business (Council, 2016a, Council, 2016b). Now even more, as Kordoš (2014) also emphasizes, innovations and innovation policies and strategies implementations are one of the most important aspects of current international economics and business development issues, especially in industrial policy. The importance of the topic and support for an active approach also illustrates the first Council Conclusions dealing with a renewed EU Industrial Strategy (Council, 2017) which were followed by the second Council Conclusions adopted in March 2018 to highlight the need to monitor the implementation of the industrial policy objectives (Council, 2018).

## 6. Conclusion

European business environment which reacts positively to the European Commission's intentions, shares its views and arguments and actively cooperates with the EU institutions. Several studies from different business sector areas from the innovation principle's perspective are under way (BusinessEurope, 2016 – first results are collected in a joint paper prepared by the BusinessEurope, the European Risk Forum (ERF) and the European Round Table of Industrialists (ERT), the three leading entities in a EU business sector, in December 2016). For sure, their results are likely to trigger intensive discussions.

It was stressed previously that the EU approach to innovation policy must be integrated and comprehensive. As mentioned above, a fully functioning Internal Market with clear rules, stable regulatory environment and relevant access to circulating financial resources would help to stimulate competitiveness and jobs-creating growth. Small and medium-sized enterprises are part of the system.

Without any doubts, application of innovation principle could allow to enhance the EU law enforcement and strengthen the EU position in economic area. Innovation as a principle should be a stimulation for further EU development rather than a barrier.

As a novelty, the innovation principle has to find its place among other principles already settled in the Union legislative process. What needs to be clarified in detail, is its nature and balance with other Treaty-based principles.

## References

- [1] BusinessEurope (2016). Impact of EU Regulation on Innovation – Repository of Industry Cases. December 2016. Available at: [https://www.busesseurope.eu/sites/buseur/files/media/reports\\_and\\_studies/2016-12-02\\_impact\\_of\\_eu\\_regulation\\_on\\_innovation\\_-\\_repository\\_of\\_industry\\_cases.pdf](https://www.busesseurope.eu/sites/buseur/files/media/reports_and_studies/2016-12-02_impact_of_eu_regulation_on_innovation_-_repository_of_industry_cases.pdf)
- [2] Charter of Fundamental Rights of the European Union (2016). OJ C 202, 7.6.2016, p. 389–405.
- [3] Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union (2016). OJ C 202, 7.6.2016. p. 1–388.
- [4] Council (2008). Competitiveness Council Conclusions adopted on 01 and 02. 12. 2008, [online]. [cit.2018-03-26]. Available at [http://www.consilium.europa.eu/uedocs/cms\\_Data/docs/pressdata/en/intm/104403.pdf](http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/intm/104403.pdf)

- [5] Council (2016a). Council Conclusions adopted on 27. 5. 2017. [online]. [cit.2018-03-28]. Available at: <http://data.consilium.europa.eu/doc/document/ST-9510-2016-INIT/en/pdf>
- [6] Council (2016b). Outcome of the Council Meeting on 29. 09. 2016. [online]. [cit.2018-03-28]. Available at: <http://www.consilium.europa.eu/media/22553/st12612en16-vf.pdf>
- [7] Council (2017). Council Conclusions adopted on 29. 11. 2017. [online]. [cit.2018-03-28]. Available at: <http://www.consilium.europa.eu/en/press/press-releases/2017/11/30/a-renewed-eu-industrial-policy-strategy-council-adopts-conclusions/>
- [8] Council (2018). Council Conclusions adopted on 12. 03. 2018. [online]. [cit.2018-03-28]. Available at: <http://www.consilium.europa.eu/en/press/press-releases/2018/03/12/eu-industrial-policy-strategy-council-adopts-conclusions/>
- [9] Devlin, A. (2015). *Fundamental Principles of Law and Economics*. New York: Routledge
- [10] European Association of Research and Technology Organisations (EARTO) (2016). The European Innovation Council – Refocusing EU Innovation Policy - EARTO recommendations to the European Commission to initiate an EIC Pilot under Horizon 2020. 19 April 2016. Available at: [http://www.earto.eu/fileadmin/content/Direct\\_Mail/EARTO\\_Paper\\_EIC\\_Pilot\\_-\\_Final\\_-\\_19042016.pdf](http://www.earto.eu/fileadmin/content/Direct_Mail/EARTO_Paper_EIC_Pilot_-_Final_-_19042016.pdf)
- [11] European Commission (2010). Europe 2020 Strategy. [online]. [cit.2018-03-28]. EU2020 Strategy was published on 3.3.2010, regularly up-dated data related to all aspects covered by the Strategy EU2020 are available at: [https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester/framework/europe-2020-strategy\\_en](https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester/framework/europe-2020-strategy_en)
- [12] European Commission (2013). *Communication from the Commission to the European Parliament, the Council, the European Social and Economic Committee and the Committee of Regions “Regulatory Fitness and Performance (REFIT): Results and Next Steps”*, COM(2013) 685 final, published on 02. 10. 2013
- [13] European Commission (2015a). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions “Better regulation for better results - An EU agenda”*, COM(2014) 215 final, published on 19. 05. 2015
- [14] European Commission (2015b). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions „Closing the loop - An EU action plan for the Circular Economy“*, COM(2015) 614 final, published on 02. 12. 2015
- [15] European Commission (2015c). EU Member States reporting about their SME-test – Summary and analyses on how they assess impact of their new regulations on SMEs. Economie – FPS Economy, S.M.E.s., Self – employed and Energy. Brussels, May 2015. (also available at <http://ec.europa.eu/DocsRoom/documents/19261> )
- [16] European Commission (2016a). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee*

and the Committee of the Regions „Europe's next leaders: the Start-up and Scale-up Initiative“, COM(2016) 733 final, published on 22. 11. 2016

- [17] European Commission (2016b). Better regulations for innovation-driven investment at EU level, Commission Staff Working Document, published by the European Commission in 2016. [online]. [cit.2018-03-28]. Available at: [https://ec.europa.eu/research/innovation-union/pdf/innovrefit\\_staff\\_working\\_document.pdf](https://ec.europa.eu/research/innovation-union/pdf/innovrefit_staff_working_document.pdf)
- [18] European Commission (2017a). New Better Regulation Guidelines. SWD (2017) 350, published on 07. 07. 2017. [online]. [cit.2018-03-26]. Available at: <https://ec.europa.eu/info/sites/info/files/better-regulation-guidelines.pdf>
- [19] European Commission (2017b). European Commission addresses barriers to innovation: the first Innovation Deal focuses on water reuse. [online]. [cit.2018-03-28]. Available at: <http://ec.europa.eu/research/index.cfm?pg=newsalert&year=2017&na=na-070417>
- [20] European Commission (2018a). Task force on subsidiarity, proportionality and doing less more efficiently, [online]. [cit.2018-03-26]. Available at: [https://ec.europa.eu/commission/priorities/democratic-change/better-regulation/task-force-subsidiarity-proportionality-and-doing-less-more-efficiently\\_en](https://ec.europa.eu/commission/priorities/democratic-change/better-regulation/task-force-subsidiarity-proportionality-and-doing-less-more-efficiently_en)
- [21] European Commission (2018b). Better Regulation Toolbox. [online]. [cit.2018-03-26]. Available at [http://ec.europa.eu/smart-regulation/guidelines/docs/br\\_toolbox\\_en.pdf](http://ec.europa.eu/smart-regulation/guidelines/docs/br_toolbox_en.pdf) or in details at [https://ec.europa.eu/info/better-regulation-toolbox\\_en](https://ec.europa.eu/info/better-regulation-toolbox_en)
- [22] European Commission (2018c). European Commission tackles barriers to innovation: the second Innovation Deal focuses on batteries for electric vehicles. [online]. [cit.2018-03-26]. Available at [https://ec.europa.eu/info/news/european-commission-tackles-barriers-innovation-second-innovation-deal-focuses-batteries-electric-vehicles-2018-mar-12\\_en](https://ec.europa.eu/info/news/european-commission-tackles-barriers-innovation-second-innovation-deal-focuses-batteries-electric-vehicles-2018-mar-12_en)
- [23] The European Risk Forum (ERF) (2015). Fostering Innovation – Better Management of Risk. *ERF Study (Monograph)*. March 2015.
- [24] Gretcherman, K., Schepers, S. (eds.). *Revolutionizing EU Innovation Policy: Pioneering the Future*. Springer, 2016.
- [25] Grmelová, N. (2016). Interpretation of Precautionary Principle in Trade Disputes between the EU and the US. In Kovářová, E., L. Melecký and M. Staničková (eds.). *Proceedings of the 3<sup>rd</sup> International Conference on European Integration 2016*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, 2016, pp. 273-281.
- [26] Miscenic, E., Raccach, A. (eds.). *Legal Risks in EU Law: Interdisciplinary Studies on Legal Risk Management and Better Regulation in Europe*, Springer, 2016.
- [27] Kordoš, M. (2014). Role of Innovations in the EU Industrial Policy and Competitiveness Enhancement. In Honová, I., M. Hon, L. Melecký and M. Staničková (eds.). *Proceedings of the 2<sup>nd</sup> International Conference on European Integration 2014*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, 2014, pp. 335-342.



- [28] Slovak Presidency (2016). Non-paper of the Slovak Presidency to carry out the ministerial discussion at the Informal Council meeting in Competitiveness (Research) format held in Reduta on 19. 07. 2016.
- [29] van den Abelee, E. (2014). The EU's REFIT strategy: a new bureaucracy in the service of competitiveness? *ETUI, Working Paper 2014.05*. Brussels, August 2014. Also available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2512683](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2512683)

## The SEPA Project as a Tool for European Integration in Payment System

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### **Abstract**

*The SEPA project was launched in 2008. This paper analyzes and evaluates the contribution of implementing the SEPA (Single Euro Payment Area) project as a means of European integration in payment and payment services through the description and analysis method. The contribution analyzes the legal aspects of the project, both European and national, with a link to the Czech Republic. It remains to be implemented and defines its link to cross-border payment. The article further considers and evaluates the SEPA share of the interbank clearing of payments in EUR within EEA (European Economic Area) countries. It is based on the hypothesis that "SEPA was and still is a contribution to European integration". The submitted contribution points to and demonstrates its veracity.*

**Keywords:** cross-border payment, payment system, SEPA, SEPA instruments

**JEL Classification:** G21, G23, K15, O16

### **1. Introduction**

After the directive No 97/5 / EC on cross-border transfers incorporated into national legal systems of countries of the European Economic Area and applied EC Regulation 2560/2001 on cross-border payments in euros, significantly increased the need for harmonization of payment systems, not only the euro area but also product portfolio and still different business practices. In this situation, a new EPC (European Payment Council) initiative was launched in spring 2002, which clearly formulated the need for the creation of the Single Euro Payment Area (SEPA) by 2010. Its legal framework should be drawn up by market leaders under the leadership of the EPC in order to eliminate external "political" interventions in the future (Schlossberger, Soldánová, 2007). However, this intention has not been fully successful. The introduction of the cash euro on 1 January 2002 as the single currency of selected European Union (EU) countries directly triggered the need to standardize and, where appropriate, consolidate procedures for the processing and implementation of payment transactions and their instruments (E.g. Jančíková, 2014 or Schlossberger, O., 2012). However, or because of this, SEPA is seen as a key milestone in European integration. Creating a unified set of conditions, rights and obligations for payments in euro, regardless of their location, is the aim of this project, including enhancing the harmonization and efficiency of payments in euro, and for this reason contributing to the full use of Economic and Monetary Union (Vânia, 2016).

This paper focuses on assessing the importance of SEPA as one of the tools for European integration, especially in the financial markets. Using methods of description, analysis and deduction, the authors try to prove the validity of the hypothesis that „SEPA was and still is a contribution to European integration”.

## **2. Problem Formulation and Methodology**

Before writing this paper, the authors analyzed the selected available resources that match the topic. These are especially studies by Vânia (2016), Jancikova (2014), Jantón-Drozdowska (2017), Jílek (2013), Martikainen (2013) or Schlossberger (2012, 2016).

Vânia and the team dealt with analyses the effect of the implementation process SEPA project on credit transfer payments in euro area countries during the period between 2008 and 2013, not by direct debit.

Jančíková dealt with the development of SEPA, the legislation and institutions involved analysis of means of payment, which are used in SEPA, and was also analyzing the benefits that SEPA brings especially for corporations.

Schlossberger and his studies from 2016 dealt with the potential consequences of its implementation SEPA for the segment of small and medium-sized enterprises. However, the author focuses on the general issues of the theory and practice of payment services in which SEPA and its payment instruments are part (2012).

Martikainen and the team in their study dealt with the idea that financial integration in some segments of the financial markets started to deteriorate during the recent period of economic turmoil in Europe. The study examines whether this phenomenon also holds true for the European retail payments market. In comparison with other segments of the financial markets, the integration of the retail payments market has been more difficult to quantify, and the effects of recent developments – including the creation of the SEPA and the economic crisis – have been hard to evaluate using existing measures of integration. Financial integration in some segments of the financial markets started to deteriorate during the recent period of economic turmoil in Europe. Its paper examines whether this phenomenon also holds true for the European retail payments market. In comparison with other segments of the financial markets, the integration of the retail payments market has been more difficult to quantify, and the effects of recent developments – including the creation of the SEPA and the economic crisis – have been hard to evaluate using existing measures of integration.

In his extensive publication, Jílek addresses general globalization in financial markets, and also mentions the importance of SEPA for unifying European payments.

Jantón-Drozdowska and the team stated that the year 2016 ended the period of the migration from national payment services to the SEPA instruments. At the same time, however, it has become apparent that some problems remained unresolved. Overcoming them requires finding suitable technological solutions. The author can see that the potential of the distributed ledger technology (DLT) is currently being explored by the financial sector and its implementation may affect the SEPA schemes in a variety of dimensions.

The authors used the analysis of the above mentioned sources and own investigation as a basis for proving the established hypothesis. The authors' own contribution is that they compared SCT and SDD in the context of the volume and number of transactions compared to other euro transactions in the interbank clearing of EEA countries processed by the clearing systems processing euro payments.

Following a historical introduction and an emphasis on regulation by the EC, the authors defined the link of SEPA project on cross-border and domestic payments as well. Then the SEPA analysis of transfers itself follows as a tool to evaluate the hypothesis.

## 2.1 Historical Excursion

The SEPA project should be seen as an important contribution to financial integration in Europe. The introduction of the euro has created the necessary conditions for such integration. The success of the single currency would be incomplete if its introduction were not accompanied by integrated payment systems, monetary and capital markets and the financial sector that provides its services in the single market. Until the introduction of the single currency euro payment systems between EU countries was essentially not regulated. The first generally applicable legal standard appeared in 1997 in the form of Directive No 1997/5 / EC on cross-border transfers. This standard was the first document, which started some regulation of cross-border payments. For banks, this meant mainly clear definition of certain terms, which consisted of general information to their clients in the implementation of cross-border transfers. These were, for example, the following information before or after the transfer (Schlossberger, 2007):

- transfer price,
- duration of the transfer,
- day of writing off and the date of the transfer amount,
- value of the transfer value,
- course used to implement the transfer etc.

As the European Commission (EC) has stated that it will continue to pursue the regulation of the payment industry, the EU banking sector has decided that it would be appropriate to respond to this situation. Banks have said they would even want to take this initiative and act in accordance with the EC, but in the form of self-regulation. Thus, in March 2002, representatives of 42 European banks met and created an EPC body (Chuchvalcová, 2007). This idea was further supported by the fact that since 1999 the TARGET system, which was initially prepared as a clearing system for high-volume payments has been operating, since the number of transactions involved, retail payments were not and are certainly not negligible. That regulation, prepared by the above mentioned EC directive, has in fact affected the whole retail market segment.

This was followed by the publication of Regulation 2560/2001 / EC on cross-border payments in euro, which laid down mainly one condition that the cross-border payments in euro should not be subject to a higher charge than that applied to the same payment in domestic payment systems, 2001). The entire regulation was initiated so that payments within the EU sent by all citizens and realized by banks were as simple and as cheap as in the case of transfers between accounts in the same city of the country. As we already know, the legal definition continued with the publication of Regulation (EC) No 924/2009 of the European Parliament and of the Council on cross-border payments in the Community, which governs cross-border transfers but also directly affects SEPA (for example, some provisions on the collection refer to the SEPA project).

Banks set themselves the goal of creating SEPA by the end of 2010 at the latest. In 2004 within SEPA, there was an expansion of the participating countries on the newly acceding countries. Furthermore it was decided that the EPC, which until then was more a kind of interest association, institutionalized. On 17 June 2004, EPC was transformed into a public benefit corporation incorporated under Belgian law, whose members were representatives of the banking sector of the then 25 EU countries. To connect were also invited banks from EEA countries as well as Switzerland. Apart from Liechtenstein, all the countries addressed have joined. At the same time, EPC members became representatives of three European banking associations.

## 2.2 Current Legal Regulation

Given that the European Commission has stated that the actual implementation of SEPA basic products (SEPA Credit Transfer – SCT and SEPA Direct Debit – SDD) was not sufficient because the self-regulatory principle did not cause the banks more actively engage in the project – see e.g. the Preamble (EU, 2012), the Commission originally proposed three legal regulations to support the implementation, in particular SEPA products. These included:

- Directive 2007/64/EC of the EP and of the Council on payment services in the internal market (PSD I);
- Regulation (EC) No 924/2009 of the EP and of the Council on cross-border payments in the Community and repealing Regulation (EC) No 2560/2001 (Regulation No 924);
- Regulation (EU) No 260/2012 of the EP and of the Council establishing technical and business requirements for credit transfers and direct debits in euro and amending Regulation (EC) No 924/2009 (Regulation No 260).

The following ones were added to the above later:

- Regulation (EU) No 248/2014 of the EP and of the Council amending Regulation (EU) No 260/2012 as regards the migration to Union-wide credit transfers and direct debits (Regulation No 248);
- Regulation (EU) 2015/751 of the EP and of the Council on interchange fees for card-based payment transactions (Regulation No 751),
- Directive (EU) 2015/2366 of the EP and of the Council on payment services in the internal market (PSD II). Its transposition into national legal was carried out by January 13, 2018.

PSD I was implemented into national laws of the Member States, in the Czech Republic into Act No 284/2009 Coll., on payment system, with effect from 13 January 2018 is the Act No 370/2018 Coll., which, however, incorporates the implementation of the PSD II. The law must be applied to domestic (national payments) and cross-border payments, because under section 75(2), rights and obligations in payment service provision are to be in accordance with the law except when payments transactions are made by a provider of these services in a non-Member State (i.e., outside of the EEA) or in the case of a payment transaction which is not the currency of a Member State. The above Regulations then only apply to SCT and SDD, and Regulation No 751 regulates the area of interchange fee. SEPA Cards and their use are not otherwise regulated by EU law, except for the general application of PSD II.

Regulation No 924 further confirmed the principle of levies on cross-border credit transfers in euro not exceeding €50,000 equal to national levies, and stipulated an obligation to state account numbers in cross-border credit transfers in the IBAN format (International Bank Account Number). This requirement was fully consistent with SEPA standards. Regulation No 260 then stipulated reachability and interoperability for SCT and SDD with a final implementation date for EMU countries and other EEA countries. This is why this Regulation is sometimes referred to as the “End-date” Regulation. Regulation No 260 also abolished the upper €50,000 limit of regulation of implementation of the principle of equal levies. If we then apply the PSD I provisions regarding time limits for processing of cross-border credit transfers in euro, we get to the point that cross-border credit transfers in euro have the same regulatory framework as SEPA transfers of member banks of this project. This eliminated the differences between cross-border credit transfers in euro and SEPA transfers.

Publication of Regulations Nos 924 and 260 therefore caused that SEPA products on the basis of SCT and SDD in EMU countries became an obligation for all providers of these payment services and they have to be applied according to the schedule stipulated in Regulation No 260, or its amendment published by Regulation No 248. Until that time, participants, in particular banks as basic payment service providers, engaged in the SEPA project by signing a declaration of accession to the project, which attested the ability to meet the technical and legal conditions of the project. This possibility remains for now for non-EMU countries (Schlossberger, 2016).

### 3. Problem Solution

At this point, the authors will not characterize the nature of the single SEPA payment instruments. This issue has already been addressed by many authors (e.g. Vânia, 2016; Jančíková, 2014 or Martikainen, 2013 and others). The importance of the SEPA project for European integration will be examined by the authors based on the results of the analysis of the number of providers involved in these payment services and the proportionality of the number and volume of euro payments processed by the main payment systems currently processing euro payments. The authors have been following these facts for several years.

First of all, according to the authors, it is necessary to answer the question of the link between SEPA payment products and cross-border and domestic payment systems of individual EEA countries and Switzerland. Here it is necessary to realize whether the country belongs to euro zone or not. SEPA products are essentially binding for all countries, both for cross-border payments and domestic payments. This obligation arises from the above-mentioned Regulations No 260 or Regulation No 248. Countries outside the euro zone continue to access the project through their providers on a voluntary basis and conclude the Adherence Agreement to the EPC.

Table 1 shows the number of participants between 2010 – 2017, which are providers of SCT and SDD.

**Table 1: Numbers of Participants Involved in SEPA Products**

Product/year	2010	2011	2012	2014	2015	2016	2017
<b>SCT</b>	4471	5841	5883	4512	4474	4437	4163
<b>SDD – core</b>	3236	4049	4047	3902	3742	3696	3415
<b>SDD – B2B</b>	2817	3380	3380	3412	3355	3303	2998

Source: EPC, own elaboration (2011-2018)

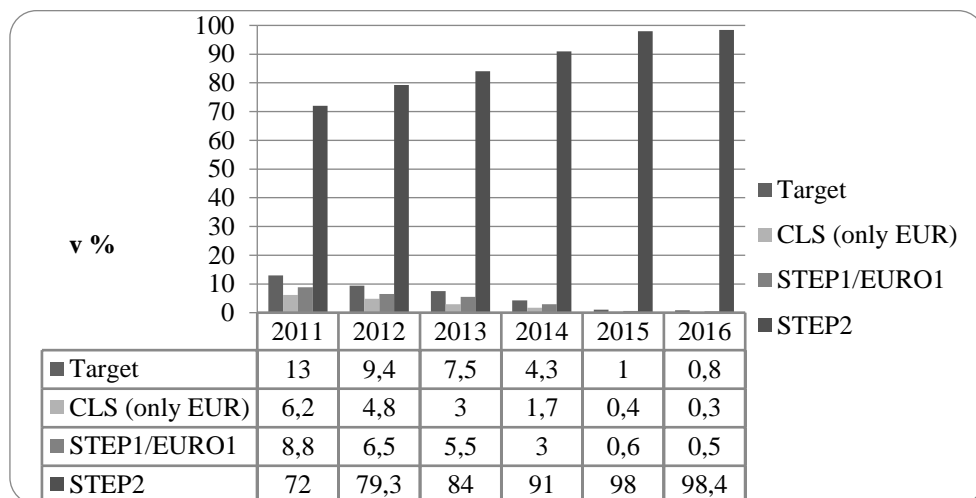
Author's note: the authors don't have data for 2013

From this overview, it is clear that the number of members using SEPA instruments has been declining since 2014. This trend can be attributed to both the fact that the EPC lists are referenced only providers - banks with assigned BIC (Business Identifier Code) and, secondly, a partial reduction in the number of providers of these products due to e.g. merger.

New scheme EPC, which is SCT<sub>inst</sub>, (SEPA Credit Transfer Instant Payments) officially launched in November 2017 – enables euro credit transfers with the funds made available on the account in less than ten seconds at any time and in an area that will progressively span over 34 European countries. To add to this, SCT<sub>inst</sub> already has 1,044 participants (EPC, 2018) on February 9, 2018.

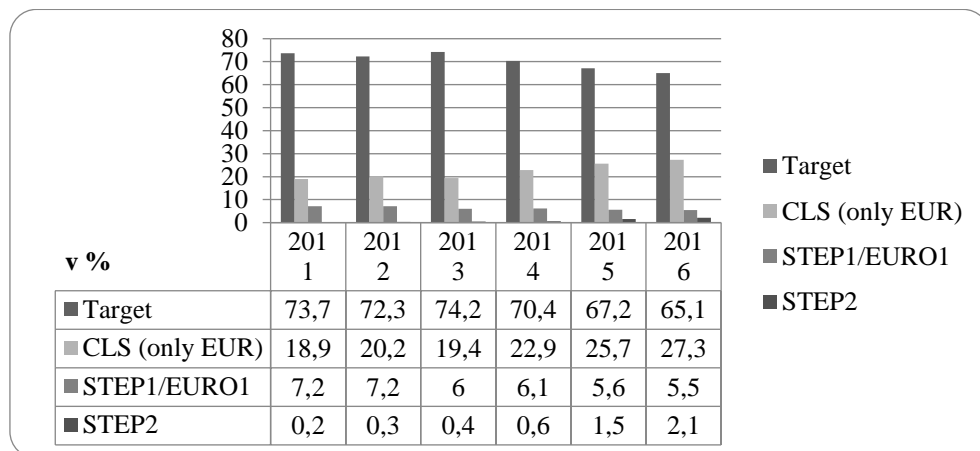
However, the criterion, which better outlines the significance of the SEPA project (and thus its core instruments - SCT and SDD) for European integration in the payment system, is the analysis of its shares of the numbers and volumes of these transactions in the total settlement of payments in EURO. Numeric and graphical expressions are shown in Figure 1 and Figure 2. The STEP2 and / STEP1 / EURO1 processes exclusively SEPA payments, other payment systems then other euro payments that do not meet the SEPA criteria. (Note: Target, STEP1/EURO1, CLS a STEP2 are the main EEA clearing systems).

**Figure 1: Share of European Payment Systems in % - Number of Transactions**



Source: European Central Bank. Payment statistics, February, 2018. Available at: <http://sdw.ecb.europa.eu/reports.do?node=100000760>; own elaboration (2017)

**Figure 2: Share of European Payment Systems in % - Transaction Volumes**



Source: European Central Bank. Payment statistics, February, 2018. Available at: <http://sdw.ecb.europa.eu/reports.do?node=100000760>; own elaboration (2017)

From the above values we can state two partial conclusions:

1. In terms of the number of payments (Figure 1), SEPA products are clearly decisive as the STEP2 system has a share of up to 98.4% (2016) on all interbank euro payments of the EEA countries. Since 2011, the share of SEPA payments has been steadily increasing, due to EMU countries being obliged to process both cross-border and national SEPA-based transfers.
2. However, the TARGET settlement system is absolutely dominated by the volume of payments. Its dominance can be explained by the fact that it balances the positions of banks, especially EMU countries, against the ECB. STEP2 is only 2.1% (2016), but SEPA has grown 10 times over the period under review.

#### 4. Conclusion

In the author's opinion, SEPA can be considered very important as it unifies the national and cross-border payments of EMU countries and facilitates the standardization of transfers of payments in cross-border euro transfers in other EEA countries.

SEPA is a key player in the EMU, but not in the other EEA countries. This is due to the fact that in EMU countries the SEPA providers are required to comply with the standard, which is given by European regulation. In terms of the share in the number of operations, SEPA is a key tool in promoting European integration by using bank clients in SEPA products in accordance with established rules. However, in terms of the volume of transactions, SEPA does not play a significant role. In this criterion, SEPA is relatively insignificant. In addition, the number of SEPA providers based on SCT and SDD has been decreasing since 2014.

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#### References

- [1] European Payment Council (2018). *SEPA instant CT* [online]. [cit.2018-02-12]. Available at: <https://www.europeanpaymentscouncil.eu/what-we-do/sepa-instant-credit-transfer>.
- [2] European Union (2001). *Regulation (EC) No 2560/2001 of the European Parliament and the Council of 19 December 2001 on cross-border payments in euro* [online]. [cit.2018-02-12]. Available at: <http://eur-lex.europa.eu/legal-content/CS/TXT/?uri=CELEX%3A32001R2560>.
- [3] European Union (2012). *Regulation (EU) No 260/2012 of the EP and of the Council establishing technical and business requirements for credit transfers and direct debits in euro and amending Regulation (EC) No 924/2009* [on-line]. [cit.2018-02-12]. Available at: [http://www.cnb.cz/cs/platebni\\_styk/pravni\\_predpisy/](http://www.cnb.cz/cs/platebni_styk/pravni_predpisy/).
- [4] Chuchvalcová J. (2007). Příprava na SEPA je z velké části hotová, na euro teprve začíná. *Bankovníctví*, No 2/2007, p. 14.
- [5] Jantón-Drozdowska, E. and Mikołajewicz-Woźniak, A. (2017). The impact of the distributed ledger technology on the Single Euro Payments Area development.



- Equilibrium*. Quarterly Journal of Economics and Economic Policy, vol.12, iss (3), pp. 519–535.
- [6] Jančíková, E. (2014). SEPA – Integration in Payments - New Opportunity for Corporations. In Honová, I. et al. (ed.). *Proceedings of the 2<sup>nd</sup> International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, pp. 288-296.
- [7] Jílek, J. (2013). *Finance v globální ekonomice I – Peníze a platební styk*. Praha: GRADA.
- [8] Martikainen, E., Schmiedl, H. and Takalo, T. (2013). *Convergence in European Retail Payments*. Frankfurt am Main: European Central Bank.
- [9] Schlossberger, O. and Soldanova, M. (2007). *Platební styk*. Praha: Bankovní institut vysoká škola.
- [10] Schlossberger, O. (2012) *Platební služby*. Praha: Management Press.
- [11] Schlossberger, O. (2016) Impact of the implementation of the SEPA project on SMEs. *European Research Studies Journal*, vol. XIX, iss (4) 2016, pp. 109-119.
- [12] Vânia G. S., Ramalho, A. E. and Vieira, R. C. (2016). The impact of SEPA in credit transfer payments: Evidence from the euro area. *Research in International Business and Finance*, No 38, pp. 404–416.

## **Polish Mieszkanie Plus Government Programme in the Context of Housing Situation in the EU**

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### **Abstract**

*The topic of housing situation in Poland in 2014-2018 represents a very serious problem which remains to be very topical. The aim of the study was to present the housing situation in Poland compared to the current situation in the EU. It was proposed that the implementation of a new government program within the economic policy of the country should have an insignificant positive effect on the improvement in housing situation in Poland. The results of the empirical research conducted by research institutions in Poland and the EU concerning the housing market presented in reports published by Forsal, Newsweek, OECD, Eurostat, Deloitte and GUS were used to achieve the study aim. The study also presents the structure of residential housing, the sector of houses and flats for rent and the price structure of newly built flats compared to the housing situation in the EU. The analysis supported the thesis of a positive effect of government programmes on the improvement in housing situation and, consequently the positive effect on the economic development of the country.*

**Keywords:** *housing in the EU, Mieszkanie Plus program, ownership structure in housing, price structure*

**JEL Classification:** *E64, G28, R21, R31, R38*

### **1. Introduction**

A comfortable flat at a reasonable price in safe location is the basic need and a fundamental right of each human. Facing the problems of poverty and social inclusion, meeting this need represents a substantial challenge to many European countries (Stephens and Leishman, 2017). According to the status as of 31 December 2016, housing resources in the country accounted for 14.3 million flats with total usable floor area of 1,053.3 million square metres, with 54.6 million rooms (GUS<sub>2</sub> [online], 2017, pp. 18, 27). The owners of most flats were natural persons, with 8.2 million apart from housing associations (57.5%) and nearly 2.9 million (20.5%) in housing associations. Total floor area of flats owned by natural persons was over 900 million square metres, accounting for nearly 86% of total floor area of flats in Poland. Resources of housing cooperatives were nearly 2.1 million flats with total floor area of 102.3 million square metres. The lowest number of flats were those owned by the State Treasury: ca. 29.1 thousand flats with total floor area of nearly 1.5 million square metres (Leszczyński and Olszewski, 2017).

According to official data of the Central Statistical Office for the year 2013 in Poland, there were 364 flats per 1,000 people, whereas the EU's mean was over 420 flats in 2011. In France, this index was 538, in Denmark - 497, and in Germany - 493. The data of the most recent census (2011) showed that the statistical deficit of flats was slightly over one million. The

scope of activities in the residential construction sector is insufficient. In 2014, there were only 760 new flats per 1,000 new married couples (Forsal [online], 2017).

Furthermore, housing needs and lifestyles of young Poles change substantially to the benefit of the sector of houses and flats for rent. The need for having the property is being gradually ousted by mobility and financial liquidity. Although operating quite effectively, the private sector of houses or flats for rent:

- is relatively small and focused on large cities,
- most of residential units for rent in the Polish market are owned by private individual investors while the sector is fragmented;
- privatization caused large differentiation of the property structure in most of residential buildings in Poland.

These facts are not conducive to standardization of the principles of rent, sense of safety of the tenants and improvement in the housing situation in Poland.

With respect to housing, governments implement rather individual policies. Most of the EU member states, however, are facing similar challenges, for example: how to recover housing resources, how to plan the development of cities and combat their uncontrolled growth, how to support sustainable development, how to help young people and groups with unfavourable financial status in the market and how to promote energy efficiency among owners of houses and flats. The problems of housing play a significant role in the social agenda of the EU (Eurostat [online], 2017). The aim of the study was to present the housing situation in Poland compared to the current situation in the EU. It was proposed that the implementation of a new government program within the economic policy of the country should have an insignificant positive effect on the improvement in housing situation in Poland.

## 2. Assumptions of the Mieszkanie Plus Government Programme

The program Mieszkanie Plus ("Flat Plus") government programme represents a response to unsatisfied needs in the housing market. As results from the examinations, nearly half of Poles are excluded from this market, including those professionally active and part of medium class. Over a million of Polish families cannot afford to buy or rent a flat and have to share it with other household members. The challenges are posed not only by high prices of flats but also by insignificant floor area per person and a relatively low standard of housing units. It should be clearly stated that without changes in this status, no breakthrough can be expected in the dramatic demographic situation in Poland.

The aim of the primary version of the programme was to promote cheap construction for rent and providing Poles with access to flats for rent at preferential prices and renting flats with the option to purchase them in the future. The program was signed on 27 September 2016, whereas its implementation started in the fourth quarter 2017. As assumed by the government, with the implementation of the program, the number of flats per 1,000 people is supposed to rise to 435 (according to GUS, in 2016, when the program was adopted, this number was 363) (Bankier [online], 2016).

The main pillar of the new program was the establishment of the National Housing Fund, supported with the land owned by the State Treasury. Consequently, the flats built on this land will be cheaper. Essentially, these will be flats for rent, with initial assumption of the option of taking over the property rights in the future and predicted rent of **from 10 to 20 PLN per square metre**. The preferred beneficiaries will be large families.

Another important component of the new program is **social support of the sector of construction of flats for rent and the cooperative construction sector**. Local governments

that implement investments in housing units with low rents and protected flats, municipal flats and shelters and night shelters for the homeless will be able to obtain from 35 to 55% of funding. Housing cooperatives, social building associations and developers will be also eligible for funding of construction of flats for rent. Furthermore, the program intends to implement 20% funding for gminas involved in construction with investors and preferential loans available in BGK bank (for gminas, housing cooperatives and social building associations).

The third element of the new programme is to create individual super accounts in banks, termed Individual Housing Accounts (Indywidualne Konto Mieszkaniowe, IKM), **which represent the support for people saving money from 2019, i.e. after completion of the previous MDM programme. During the session on 21 February 2018 the government adopted that IKMs can be set up in any bank, but they will be supervised by the Bank Gospodarstwa Krajowego (BGK).** The first IKMs should be offered by banks in 2018, whereas the saving bonuses will be paid from 2019. The government did not make a decision on the maximal level of savings on IKMs for which the bonuses will be paid and the maximal levels of the bonuses.

The allowances for IKMs will be supported by the budgetary resources from the specific reserves. The minimal period of saving is 5 years. **The funds collected in IKMs can be spent on any housing purposes:** renovation of flats, purchase of a flat, deposit in the housing cooperative, building a house or deposits in social building associations. If the resources are not used for housing purposes, the owner will be obliged to return the bonus to the bank where the account was set up.

The National Housing Program will be supervised by the National Housing Council as a counselling and assessment entity established in the office of the Prime Minister of the Republic of Poland. The members of the council include experts from the sector of real estate and finance, whose tasks will be annual assessment of the activities started within the program (Business Insider [online], 2018).

The new Mieszkanie Plus government programme, based on construction of flats for rent at preferential prices and renting flats with the option to purchase the flat is supposed to provide people with their own flats, thus improving the housing situation in Poland.

### 3. Problem Formulation and Methodology

The motivation for starting the analysis of housing situation in Poland was unsatisfied housing needs of Poles. The aim of the study was to present the data about housing situation in Poland in 2014-2016 compared to the situation in the EU. It was proposed that the implementation of a new government program within the economic policy of the country should have an insignificant positive effect on the improvement in housing situation in Poland. The study used available literature concerning the real estate sector and the results of empirical examinations performed by national and foreign research institutions.

The aim was achieved by using the data contained in the reports prepared by Forsal, Newsweek - OECD, Eurostat, Dolittle and GUS using the method of secondary data analysis. The data allowed for presentation of the property structure in the housing sector and price structure of newly built flats. The structures of the housing sector of houses and flats for rent and privately-owned housing sector were also presented. Presentation of the residential housing sector was compared to the current housing situation in the EU.

The analysis was performed to achieve the study aim and support the adopted hypothesis.

#### 4. Problem Solution

A very large deficit of flats in Poland does not fully satisfy the housing needs, which are substantial (Newsweek [online], 2015). In the case of young Poles, the housing needs and preferred lifestyles are changing towards renting flats that allows for mobility, flexibility and financial liquidity and the decreasing need for ownership. Recently, after years of a decline, the private sector of flats for rent in large cities has increased substantially and became an alternative to many Polish households (Deloitte [online], 2017). Since the private rental sector has little effect on the national market, the main method to invest in real estate for rent in Poland is to implement developmental projects. The interest in projects that promote housing for rent is increasing.

The condition of housing in Poland reflected by housing resources and values of indices that reflect the mean number of rooms in a flat, number of people per flat and per room and usable floor area per person is presented in Table 1 and 2.

**Table 1: Housing Resources in Poland According to Forms of Property (2016)**

Specification	Flats	Floor area, m <sup>2</sup>
<b>TOTAL</b>	14,272,010	1,053,251,803
<b>Property:</b>		
<b>Housing cooperatives</b>	2,073,935	102,336,104
<b>Gminas (municipal)</b>	868,517	38,306,151
<b>Company</b>	79,308	4,564,658
<b>State Treasury</b>	29,127	1,473,620
<b>Social building associations</b>	98,221	4,843,218
<b>Natural persons:</b>		
<b>In housing associations</b>	2,896,622	151,532,068
<b>Apart from associations</b>	8,200,535	748,761,778

Source: GUS<sub>a</sub> (2017, pp. 328-333), GUS<sub>b</sub> (2017, pp. 18-19)

**Table 2: Housing Conditions in Poland in 2005 - 2016**

Mean indices of:	2005	2010	2015	2016
<b>Number of rooms per flat</b>	3.69	3.81	3.82	3.82
<b>Number of people per flat</b>	2.99	2.86	2.72	2.69
<b>Number of people per room</b>	0.81	0.75	0.71	0.70
<b>Usable floor area per person [m<sup>2</sup>]</b>	23.2	25.3	27.0	27.4

Source: Uchwała (2016), GUS<sub>a</sub> (2017), GUS<sub>b</sub> (2017)

Table 1 shows that there were 6071,5 thousand flats in 2016 in buildings which were subjected to management/administration. Among them, 47.7% were flats of natural persons in buildings included in housing associations, 34.2% were property of housing cooperatives, 14.3% - municipal flats, 1.6% - social building associations, 1.3% - company flats, 0.5% - the State Treasury, and 0.4% - flats owned by other entities. These data clearly point to the fact that contribution of a cheap flats in social building associations (TBS), in both cooperative and municipal housing, accounts for ca. 50% of flats in buildings under management or administration and 20% of housing resources (Sitek, 2016). Their contribution to promotion

of cheap construction is rather insignificant, leading to the necessity of using effective development projects.

Analysis of housing conditions in Poland in 2005-2016 (Table 2) indicates the substantial increase in the number of flats, rooms in a flat and reduction in the number of persons per room. This tendency was caused, among other things, by new investments in housing, extension and reconstruction of current buildings and changes in the character and purpose of non-housing floor areas. Comparison of mean costs of purchase and rent in 2016 in selected European countries is presented in Table 3.

**Table 3: Mean Costs of Purchase and Rent of Flats in Selected European Countries (2016)**

Country	Mean price per square metre of a flat	Mean monthly cost of rental per square metre of a flat
Austria	3443 EUR	9.5 EUR
France	5440 EUR	21.0 EUR
Germany	3700 EUR	10.0 EUR
Poland	1299 EUR	7.5 EUR
Romania	1150 EUR	5.5 EUR
Switzerland	7541 EUR	17.8 EUR

Source: based on: Eurostat (2017), Deloitte (2017), Forsal (2017)

As shown in Table 3, mean price per square metre of a flat is 2200-2600 EUR, with large differences between countries (Romania: 1150 EUR/m<sup>2</sup>, Switzerland – 7541 EUR/m<sup>2</sup>) (Barrios and Javier, 2017). Also the prices of rental are characterized by high variation. Relatively low costs of rental in Germany and Austria compared to mean prices per square metre of a flat in these countries were 0.27% (Wind et al. 2017). This reflects an efficiently functioning market of flats for rent. In Poland, the price per square metre of a flat is at the level below the EU's average at a relatively low rental price. Relation of these prices is twice higher than in Germany and Austria (0.58%). This high ratio of the rental price to price of a square metre of a flat suggests a poorly developed market of houses and flats for rent in Poland and its huge developmental potential.

**Table 4: Flats for Sale and Rent in the Housing Resources in 2010, 2015, 2016**

Specification	2010	%	2015	%	2016	%
<b>Average usable floor area per 1 flat [m<sup>2</sup>]</b>	106.1		99.8		96.4	
<b>For sale and rent</b>	66.2		58.5		58.2	
<b>Flats delivered to the market in thousands</b>	135.8	100	147.7	100	163.3	100
<b>For sale and rent</b>	53.3	39.3	62.4	42.2	79.2	48.5
<b>Flats per 1,000 new married couples</b>	595	100	782	100	844	100
<b>For sale and rent</b>	158.6	26.7	173.5	22.2	220.9	26.2
<b>Usable floor areas of flats in thousands square metres</b>	14441	100	14739	100	15427	100
<b>Floor area of a flat for sale and rent</b>	3544	24.5	3654	24.8	4607	30.0

Source: GUS<sub>a</sub> (2017, pp. 332-333)

In 2000, the most prevalent form of state's intervention concerning the improvement in housing situation in the country was to offer flats for rent by the National Housing Fund that operated at the BGK bank. Furthermore, with the private sector of real estate, rent started to be important as an alternative to many households, but this tendency was incomparable to European standards. The figures for flats delivered in 2010, 2015 and 2016, with specification of flats for sale and flats for rent are presented in Table 4.

All the indices in Table 4 that characterize housing resources suggest the improvement in housing conditions in the population. However, they remain to be substantially lower than in the developed countries of the EU. This conclusion is also reflected by the housing statistics for Poland and the EU (Uchwała [online], 2016, pp. 9-10 and Eurostat [online], 2017), presented in Table 5.

**Table 5: Statistical Data for Housing of Poland and EU (2016)** (% of the population)

Population with division into types (1) and legal titles (2) to the housing units

	Flat (1)	Semi-detached house (1)	Detached house (1)	Other (1)	Owner occupied, no loans (2)	Owner occupied with loans (2)	Tenant-market price (2)	Tenant-reduced price or free (2)
<b>PL</b>	44.1	5.2	50.6	0.1	72.8	10.9	4.5	11.8
<b>EU 28</b>	42.0	24.1	33.3	0.6	42.5	26.9	19.7	10.9

overpopulation (3), housing deprivation (4), overload with housing expenses (5)

	Total (3)	Population at risk of poverty (3)	2014 (4)	2015 (4)	Total (5)	Owner occupied with loan (5)	Owner occupied, no loans (5)	Tenant-market price (5)	Tenant-reduced price or free (5)
<b>PL</b>	43.4	59.7	9.1	9.8	8.7	12.6	7.1	26.3	10.9
<b>EU 28</b>	16.7	29.5	5.0	4.9	11.3	6.7	6.8	27.0	12.4

Source: Eurostat (2017)

The data presented in Table 5 were derived from the European survey of incomes and conditions of living in the EU 28 countries (Eurostat [online], 2017, and Barrios and Javier, 2017). The data show that Poland, compared to the EU, has to face numerous challenges, with substantial housing needs in terms of types and legal titles to flats, overpopulation, housing deprivation and overload with housing expenses. The statistics reveal (Uchwała [online], 2016), that of 27 of the EU countries, Poland is 19th in terms of average size of the flat, 24th in terms of the usable floor area per person and 23rd in terms of overpopulation index. Furthermore, mean prices of new flats in the EU and Poland are as follows: maximal value of the transaction price is 14089 EUR/m<sup>2</sup> for the London's centre, 7980 EUR/m<sup>2</sup> in the London's outskirts, 10266 EUR/m<sup>2</sup> in Paris, 6500 EUR/m<sup>2</sup> in Tel Aviv, whereas the lowest level was found for Porto: 860 Eur/m<sup>2</sup>. In Poland, these levels were 1101 EUR/m<sup>2</sup> in 2013 and 1111 EUR/m<sup>2</sup> in 2014. This analysis emphasizes an unfavourable housing situation of Poland compared to the EU countries.

Housing situation in Poland leads especially to emigration of young Poles. Furthermore, with the inflow of immigrants from Ukraine caused by socio-political situation of this country, the need for flats for rent are increasing. The deficiencies in labour force in Poland, caused by economic emigration of young people to the EU countries, also lead to opening of the labour market while increasing the demand for flats for rent. Consequently, the prices of flats and

rents are increasing. Therefore, the housing situation in Poland compared to the developed countries of the EU should be considered as unfavourable. The analysis showed unequivocally that the labour market in Poland requires a strong support, especially in the area of flats for rent. Since the sector of rent of privately-owned flats, despite the recent substantial growth, is insignificant to the national market, the improvements in the housing situation can be expected to be stimulated by governmental development projects as major methods of investing in real estate for rent.

The statistics concerning housing presented in this study and the property and price structures of the housing for Poland in the context of the EU show that there is much space for the improvement in terms of housing in order to reach average European standards. This is the responsibility of the government, which, using the *Mieszkanie Plus* program, with all its availability and benefits, assumes a substantial improvement in the housing situation while developing its own policy. In the context of the housing situation presented in the study, the government made the decision on the implementation of the *Mieszkanie Plus* programme in order to improve this situation.

## **5. Conclusion**

Previous housing policy failed to respond to the basic challenges connected with availability of flats for households with average and low incomes. With the main aim to support the housing sector in Poland, the recently implemented *Mieszkanie Plus* government programme is expected to improve this situation.

The analysis carried out in the study led to confirmation that the share of cheap housing construction is not sufficient to satisfy housing needs in the country, and that the large housing deficit places Poland well below European standards. In Poland, the current housing situation affects, in part, the economic emigration of young people to the EU, but the *Mieszkanie Plus* program based on renting is to guarantee a flat for life. The implementation of this guarantee already in the very assumption of improving the housing situation and at the same time only slightly supporting the rental market, shapes domestic policy in this field. In the proposed programme promoting large families will make young people queue up waiting for long years, and beneficiaries of the program will not be able to choose the type of property, location and standard. However, in the case of rental, the increased demand for rental apartments in the near term must result in an increase in rental prices, not conducive to improving the housing situation in Poland.

Furthermore, analysis of housing situation in Poland showed that despite continuous improvement in housing situation in Poland, basic indices of housing resources and conditions remain to be much lower than in the developed countries of the EU. The private sector of houses or flats for rent in Poland, although operating relatively efficiently, is relatively small, focuses on larger cities and has no capabilities to improve housing situation in the country. Despite ambitious objectives and quite a long perspective, the *Mieszkanie Plus* government programme, is likely to support current housing situation; however, due to its drawbacks, the scale of support may be not substantial.

The analysis of the housing situation in Poland compared to the EU countries allowed for the achievement of the study aim, and led to the conclusion that the effect of the *Mieszkanie Plus* government programme on the improvement in the housing situation is limited.

Further research is planned to assess the impact of government policy implementation on the improvement of the housing situation in Poland.



## References

- [1] Bankier (2016). *Program "Mieszkanie Plus"- szczegóły* [online]. [cit.2016-12-10]. Available at: <https://www.bankier.pl/wiadomosc/Program-Mieszkanie-Plus-szczegoly-7408952.html>.
- [2] Barrios, G. and Javier. A. (2017). Did the Economic Crisis Have the Same Effect on Home-Owners and Renters in Terms of Employment? *Revista de Economia Aplicada*, vol.25, iss. 75, pp. 53-85.
- [3] Business Insider (2018). *Dopłaty do Mieszkania plus będą, ale wciąż nie wiadomo w jakiej wysokości* [online]. [cit.2018-02-25]. Available at:<https://businessinsider.com.pl/wiadomosci/mieszkanie-plus-panstwowe-doplaty-do-czynszow/g34r2h9>.
- [4] Deloitte (2017).*Property Index 2017* [online].[cit.2017- 09-15].Available at:[https://www2.deloitte.com/content/dam/Deloitte/pl/Documents/Reports/pl\\_en\\_property\\_index%202017\\_020817.pdf](https://www2.deloitte.com/content/dam/Deloitte/pl/Documents/Reports/pl_en_property_index%202017_020817.pdf).
- [5] Eurostat (2017). *Dane statystyczne dotyczące mieszkalnictwa* [online]. [cit. 2017-09-15]. Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Housing\\_statistics/pl](http://ec.europa.eu/eurostat/statistics-explained/index.php/Housing_statistics/pl).
- [6] Forsal (2017).*Duże zyski z wynajmowania mieszkania w Polsce* [online].[cit. 2017-10-12]. Available at: <http://forsal.pl/nieruchomosci/aktualnosci/artykuly/1061381,duze-zyski-z-wynajmowania-mieszkania-w-polsce-oto-wyniki-najnowszego-raportu.html>.
- [7] GUS<sub>1</sub> (2017).*Rocznik Statystyczny Rzeczypospolitej Polskiej*, Warszawa: Zakład Wydawnictw Statystycznych.
- [8] GUS<sub>2</sub> (2017). *Gospodarka mieszkaniowa w 2016 r* [online]. [cit. 2017-10-21]. Available at:  
[9] <https://stat.gov.pl/obszary-tematyczne/infrastruktura-komunalna-nieruchomosci/>.
- [10] Leszczynski, R. and Olszewski, K. (2017). An Analysis of the Primary and secondary housing in Poland: evidence from the 17 largest cities. *Baltic Journal of Economics*, vol. 17, iss. 2, p.136-151.
- [11] Newsweek (2015). *Międzynarodowe badania OECD pokazują jak dramatyczna jest sytuacja mieszkaniowa w Polsce* [online].[cit.2017-03-25].Available at: <http://www.newsweek.pl/polska/międzynarodowe-badania-oecd-pokazuja-jak-dramatyczna-jest-sytuacja-mieszkaniowa-w-polsce.artykuly,405333,1.html>.
- [12] Sitek, M. (2016). Investment Projects Management for Development of Real Estate Market in Poland. In *1st International Conference CITPM*, Częstochowa: University of Technology, Faculty of Management, pp.390-396.
- [13] Stephens, M. and Leishman, C. (2017). Housing and poverty: a longitudinal analysis. *Housing Studies*, vol. 32, iss. 8, pp. 1039-1061.
- [14] Uchwała (2016) *Nr 115/2016 z dnia 27 września 2016 r. w sprawie przyjęcia Narodowego Programu Mieszkaniowego* [online]. [cit. 2017-10-21]. Available at: [https://narodowyprogram.pl/wp-content/uploads/2017/03/uchwa%C5%82a\\_narodowy\\_program\\_mieszkaniowy.pdf](https://narodowyprogram.pl/wp-content/uploads/2017/03/uchwa%C5%82a_narodowy_program_mieszkaniowy.pdf).
- [15] Wind, B., Lersch, P. and Dewilde, C. (2017). The distribution of housing wealth in 16 European countries: accounting for institutional differences. *Journal of Housing and the Built Environment*, vol.32, iss.4, pp. 624-647.

# Comparative Analysis of Sustainable Energy Development in Poland Against Selected European Union Countries

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## **Abstract**

*Sustainable energy development is a process of permanent, safe and effective energy supply for the needs of sustainable development. The competitiveness of countries is directly related to the progress achieved in implementing sustainable energy development as the energy sector has great significance for the future development of the country, for economic growth and has a major impact on the environment. The aim of the article is to present the concept of sustainable energy development and indicators for assessing the development of energy in the following dimensions: social, economic and ecological. An attempt was made to assess the sustainable energy development in Poland against selected European Union countries. The following indicators of sustainable energy development were compared: sustainable consumption and production, marking the production and consumption of energy; climate change, marking GHG emissions and the share of renewable energy in gross final energy consumption; sustainable transport, marking the energy consumption of transport relative to GDP.*

**Keywords:** *alternative energy source, energy indicators, energy sector, sustainable energy development*

**JEL Classification:** *F64, O13, Q42*

## **1. Introduction**

Difficult access to energy resources and the environmental degradation are some of the basic threats to economic development of the contemporary world. In these circumstances the concept of sustainable development is more than just a theoretical solution and becomes an actual tool for shaping human development. The application of the concept necessitates its description for individual sectors of the economy. One of the key areas for sustainable development is power industry. Many countries create new concepts of its development and modify their energy systems to be compatible with the goals of sustainable development. Due to high costs, the strategy of sustainable development based on climate sustainability which is part of the "Europe 2020" document and the European Union's objectives for 2030 and beyond is a major challenge for many countries (Štreimikienė, Ališauskaitė-Šeškienė, 2016, p. 4-18). The reason for this in Poland is the one-sided structure of energy balance and the very nature of the Polish energy system which implies this structure. The winter package, a document called "Clean Energy for all Europeans", which was published by the European Commission on 30 November 2016, introduces admissibility of electric energy sources with CO<sub>2</sub> emission level below 550 kg/MWh on the power market. It thus eliminates all coal power plants and prevents the Member States from choosing their energy mix freely. Additional restrictions are brought by new regulations in the European Union based on BAT techniques. They tighten the

limits of the emission of nitrogen oxides, sulphur oxides and dust particles which so far have been regulated by the directive on industrial emissions from sources above 50MW, and introduce limits on chlorine compounds and heavy metals. The implementation of new regulations, which embrace also medium size sources (1-50MW), means significant expenditure on the adaptation of commercial and industry energy sources and heating. That is why the realization of the requirements of the European Union's climate and energy policy is a major and difficult problem for Poland. (Włodarczyk, 2016, p.1086-1095)

The goal of the article is to explain the notion of the "sustainable development of the energy sector." The paper discusses indicators which describe it in the social, economic and ecological dimensions. An attempt was made to assess the development of sustainable energy in Poland and selected European Union countries.

## 2. Comparative Study of the Notion of Sustainable Energy Industry

Sustainable development is the basic and primary goal of the European Union (Article 3 on the Treaty of the UE [online], 2018). The definitions of sustainable development indicate the need for the integration of development goals: economic, ecological and social. New Agenda for Sustainable Development 2030 covers 17 goals, among which goal 7 is key - to secure access to low-cost, sustainable energy to everyone. Energy policy of the European Union regarding the electricity sector, according to the provisions of the Green Paper from March 2006 (COM, 2006,0105), aims at the realization of tasks along the philosophy and principles of sustainable development. The subject literature gives a few definitions of the sustainable development of energy. They refer to the definition of sustainable development presented by the Brundtland Commission (Our Common Future [online], 1987). W. Patterson defines the sustainable development of energy as: "the use and supply of energy which meet our needs without putting the ability of our children to satisfy their needs at risk" (Patterson, 2009, p.14). Lemaire's view is similar (Lemaire, 2004) and J.W. Tester et al. (Tester et al., 2005, p.XIX) focus mainly on the problem of sustainability. Long-term accessibility, as the central interest of the concept of sustainable development, should be offered in accordance with the environmental protection requirements. The third area is the social aspect. It is not as emphasized as environmental matters, but is also present in the definitions of sustainable energy W. Tester and UNDP (Tester et al., 2005, p.XIX; UNDP, 2000). A broader socio-economic and economic approach towards sustainable energy is also present in the definition by Citizens Network for Sustainable Development (Prandecki, 2014, p.240). Also the LG Action organization, which concentrates local governments acting in favor of sustainable development, points out that sustainable energy is not just a problem of sustainability. It is also connected with the authorization for use of energy sources whose production and utilization does not have a negative influence (or it is just slight) on people's health, the environment and the functioning of natural systems. (LG Action, [online], 2009). The policy of sustainable energy in three dimensions: ecological, economic and socio-cultural is also described by H. Rogall (Rogall, 2009). In his research he proposes three criteria of sustainable development: ecological dimension (global warming, natural tolerance, the consumption of non-renewable resources, excessive use of renewable resources, hazards for human health), economic dimension (influence on the state economy, meeting energy needs, short-term security of supply, good prices), socio-cultural dimension (social tolerance, constant security of supply, integration with existing infrastructure, avoiding participation in global conflicts, security). A division of sustainable energy into three pillars is also presented by G. P. Hammond i C.I. Jones (Hammond and Jones, 2011). According to the quoted authors, in the framework of the environmental pillar the effects of the application of a given technology should be subject to environmental impact assessment. Life cycles and full fuel cycles could serve as tools for such

an analysis. In the area of the economic pillar we carry out an analysis of costs and benefits for the environment. The social pillar focuses on an ethical assessment of the influence of existing and potential energy sources on the environment and society. The subject literature highlights the importance of the entire sustainable energy system which meets the requirements of the concept of sustainable development. It also emphasizes that efficient energy management is just as significant as its efficient production (Mitchel, 2010, p.9). An interesting definition of sustainable energy industry is offered by K. Prandecki (Prandecki, 2014, p.240). He defined it as a change of primary energy into electric energy and heat provided to the end user in a way which ensures satisfying the needs of current and future generations with the consideration of economic, social and environmental aspects of human development. The dynamics of the process of sustainable development was underlined by A. Graczyk (Graczyk, 2017, p.53-68). He defines the sustainable development of the energy sector as a process of sustainable, secure and effective energy supply. Put in this way, sustainability means ensuring access to energy with the principle of intergenerational fairness. Sustainability of development is a balance between its three dimensions: social, economic and ecological.

### **3. Indicators of the Sustainable Development of the Energy Industry**

Sustainable development of energy industry, which is a crucial element of sustainable development, is monitored with a set of various indicators in international comparisons as well as on the European level with the purpose to evaluate the goals of energy, climate and ecological policy (Sahabmanesh, Aref, Saboohi, Yadollah, 2017, p.66-79). The measures of sustainable development enable a statistical presentation of a country from the point of view of the implementation of a new development paradigm. Their most important feature is comparability which facilitates the determination of the position of a given object, such as a country, with reference to other objects. The set of indicators of the sustainable development of the EU consists of many thematic areas, from economic, social and ecological to the institutional dimension and global partnership. They can be in the form of goals or structures which serve as reference models to be reached by sustainable development. Reaching these goals, or these positive target states in a given time is registered by the indicators of sustainable development.

#### **3.1 IAEA Indicators**

The IAEA set of variables monitoring the development of the energy industry is versatile. It works with different types of countries and energy systems and can also be used in a regional context. It approaches the problem of the sustainable development of energy comprehensively and excludes institutional indicators. The set consists of 30 indicators divided into three dimensions (social, economic and ecological) (Energy indicators, [online], 2005). The indicators are grouped thematically. Some of them can be classified in more than one dimension depending on the discussed issue.

#### **3.2 Eurostat Indicators**

The Eurostat database features a broad list of sustainable development indicators divided into ten thematic areas (Sustainable Development Indicators, [online], 2017). „Climate change and energy” is one of them and the following indicators were distinguished here: greenhouse gases emissions, primary energy use, energy saving, greenhouse gases emission according to sectors, energy dependence, share of renewable energy in the gross final consumption of energy, gross consumption of energy in a country according to fuel type, electric energy from renewable

sources, share of renewable energy in the fuel consumption in transport, combined generation of heat and energy, use of energy in transport in relation to GDP, energy tax rate (Sustainable Development Indicators, [online],2017).

### ***3.3 Indicators Monitoring the Achievement of the Goals of the Sustainable Development of Energy Industry by Central Statistical Office***

The elaboration by Central Statistical Office on the indicators of sustainable development contains a list of indicators of sustainable development arranged according to social, economic, ecological and institutional and political governances (Sustainable Development Indicators, [online], 2015).

Within individual governances there are also indicators connected with the power industry.

1. In the social governance area we find:
  - a) exposure of urban dwellers to excessive influence of PM10 dust;
  - b) exposure of urban dwellers to air contaminated with ozone;
  - c) consumption of energy in households per capita;
  - d) structure of average monthly expenditure per a household inhabitant per type (including household exploitation and energy carriers).
2. The ecological governance area contains:
  - a) greenhouse gases emission expressed in CO<sub>2</sub> equivalent;
  - b) emission of greenhouse gases across sectors;
  - c) emission of greenhouse gases per a unit of used energy;
  - d) quality of air (46 zones in a country where the quality of air is tested);
  - e) emission of acidifying pollution per 1 km<sup>2</sup>;
  - f) share of energy from renewable sources in the gross final consumption of energy;
  - g) share of energy from renewable sources in fuel consumption in transport;
  - h) percentage of expenditure on fixed assets for nonconventional sources of energy;
  - i) energy intensity of the economy.
3. In the economic governance area:
  - a) energy intensity of transport in relation to GDP.

The indicators used by Central Statistical Office largely overlap with the Eurostat indicators. Their diversity enables the monitoring of the development of sustainable power industry. The use of a set of indicators which comprehensively present the development of the energy industry can contribute to the determination of this development in a more balanced way.

## **4. Indicators of the Sustainable Energy Development in Selected EU Countries**

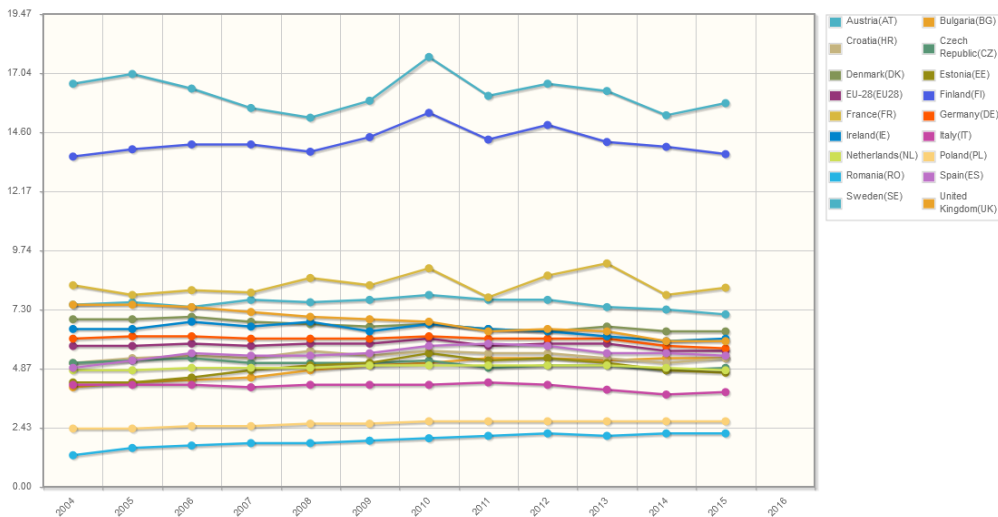
In order to analyze the sustainable development of energy in selected EU countries, the values of indicators leading in the following thematic areas were examined: sustainable consumption and production (electricity consumption in households per capita), climate change and energy (GHG emissions in CO<sub>2</sub> equivalent, share of renewable energy in gross final energy consumption), organization of transport respecting the principle of sustainable development (energy consumption of transport relative to GDP).

Transport is the key sector in the analysis of sustainable development. The energy consumption in transport indicator relative to GDP determines a percentage change in the final consumption of energy by transport per a GDP unit relative to 2010. A decrease in the indicator's value is a desired tendency. The indicator offers a possibility to determine the relation between energy

consumption in transport and economic growth. GDP increase should not be a consequence of an increase in the consumption of energy in transport. Since 2004 the majority of the countries have been reducing the final energy consumption in transport per a GDP unit. Some of the countries, though, saw an increase in 2015 compared to 2010: Bulgaria 110,1% and Croatia 104,3%. The other countries experienced a decrease. The average for the European Union was 93,4%. The lowest values among the analyzed countries were obtained in Ireland 71,6%, Poland 83,9% and Estonia 84,1%.

One of the main indicators for monitoring sustainable consumption and production of energy is the electric energy consumption in households per capita. It paints the picture of the consumption of electric energy by household inhabitants in time. A decrease in the indicator's value is a desired tendency. The increase of the indicator caused by lifestyle change (for example more electric appliances in a household) fosters "nonsustainable tendencies" in the consumption of energy by households which bring serious environmental impact.

**Figure 1: Electricity Consumption in Households per Capita (Total GJ)**



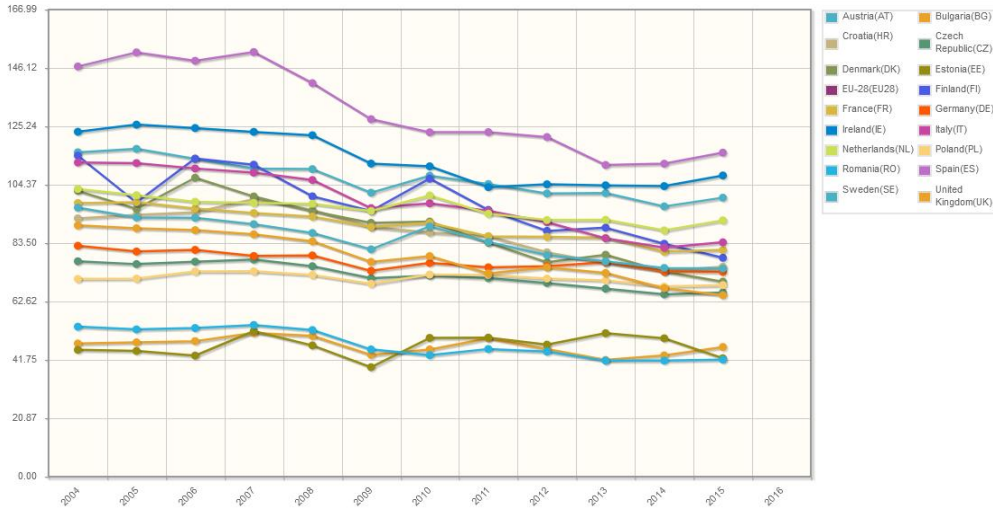
Source: own elaboration based on Eurostat (2018)

In 2015 the average electric energy consumption in households per capita in the UE-28 countries was 5,6GJ. The lowest value of the indicator, like in previous years, was observed for Romania 2,2 GJ and Poland 2,7 GJ. Among the countries with the highest indicator of electric energy consumption per capita (over 3 times higher than the Union average of 5,6 GJ), the following ones stand out: Sweden 15,8 GJ, Finland 13,7 GJ and France 13,7 GJ.

The indicators leading in monitoring the changes in climate and energy are GHG Emissions in CO<sub>2</sub> equivalent and the share of renewable energy in gross final energy consumption. The former determines the total annual emission of greenhouse gases created by men ("Kyoto Basket") in relation to the emission of greenhouse gases in the base year 1988 in accordance with the Kyoto Protocol, with the exclusion of emission from international air and sea transport and emission connected with land use and land use change and forestry (LULUCF). 1988 is the base year for Poland for the evaluation of the country's fulfillment of obligations of the Conference of the Parties of the United Nations Framework Convention (UNFCCC) and the

Kyoto Protocol. For the majority of countries the year 1990 was assumed. The base year for Poland for industrial gases (HFCs, PFCs, SF<sub>6</sub>) is 1995. The desired direction of change is the decrease in the indicator's value.

**Figure 2: GHG Emissions in CO<sub>2</sub> Equivalent (1988 =100); Total (%).Chart of Values for Years and for Separate Territorial Units**

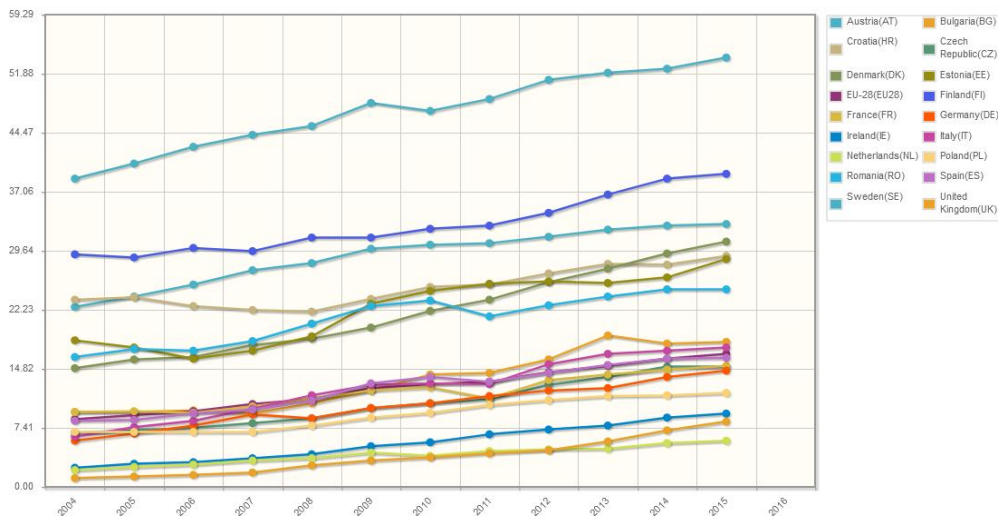


Source: own elaboration based on Eurostat (2018)

Most EU countries record a drop in the total emission of greenhouse gases in relation to the base year which means they fulfill their obligation to reduce greenhouse gases emission to support sustainable development. In the group of the analyzed countries, the lowest emission in 2015 compared to the base year was observed in: Romania 41,85%, Estonia 42,33%, Bulgaria 46,33%. The highest in: Spain 115,84% and Ireland 107,68%. The obligation to reduce the emission of greenhouse gases in the first period of Kyoto Protocol (2008-2012) was fulfilled by Poland with a surplus as the country's greenhouse gases emission was reduced by 29,1%. Yet in order to protect the climate, further reductions of emission are necessary. In 2015 the emission level was 68,48%. It is estimated that a long-term quantitative goal is to reach a 30-40% reduction of greenhouse gases emission until 2020 in relation to the base year.

Another indicator in the area of tracking of climate and energy changes is the share of energy from renewable sources in gross final energy consumption. It reflects the level of energy from RES in the final energy consumption in a country. It provides monitoring of the effects of activities promoting the production and consumption of renewable energy in all sectors. Increasing pollution of the environment, growing energy demand and the exploitation of its traditional resources increment the demand for energy from renewable, environmentally friendly sources.

**Figure 3: Share of Energy from Renewable Sources in Gross Final Energy Consumption; Total (%). Chart of Values for Years and for Separate Territorial Units**



Source: own elaboration based on Eurostat (2018)

Since 2004 the countries have been increasing their share of renewable energy. In the analyzed group of EU countries in 2015, Poland with the share of energy from renewable sources in gross final consumption on the level of 11,8% took a position far behind Sweden (53,9%), Finland (39,2%), Austria (33,0%) and Denmark (30,8%) where the values of the indicator were highest. The lowest share of energy from renewable sources was recorded in the Netherlands (5,8%) and United Kingdom (8,2%). Since 2008 in Poland the share of renewable energy in gross final consumption has been on a constant but slight increase. It went from 6,9% to 11,3% in the years 2004-2007, and up to 11,8% in 2015. The observed increase of energy from renewable sources is also reflected in the growing diversification of these sources. The share of RES in gross final consumption often differs from the share in primary production.

## 5. The Analysis of the Similarity of the Primary Energy Production Structure in Poland to the Ones in the Selected EU-28 Countries

The analysis of the changes in the structure of primary energy production in Poland and selected EU-28 countries is based on data from the Eurostat energy balance 2010 and 2015 on a yearly basis. The structure of the production of primary energy in Poland and EU-28 is presented in table 1.



**Table 1: The Frequency Coefficient of the Structure of Primary Energy Production in Poland in the Years 2010 and 2015**

	Solid fuels	Oil (total)	Natural gas	Nuclear energy	Renewable energy	Wastes (non ren.)
<b>2010</b>	0.823617	0.010463	0.053811659	0	0.103139	0.008969
<b>2015</b>	0.802395	0.013473	0.055389222	0	0.121257	0.007485

Source: own elaboration based on Eurostat (2018)

A comparison of the primary energy production structure in Poland shows that the share of energy from renewable sources in 2015 was bigger than in 2010. In 2015 it was 2,1%, gas 5,5 %, and petroleum products 1,3%. In Poland there are no nuclear power plants. The basis of production in the discussed period were fossil fuels. In 2015 they accounted for 80,2% of total production. In order to analyze the intensity of changes in the sector structure of energy production, we use a measure determining structural changes proposed by Rutkowski (Rutkowski, 1981). It is a variability coefficient of the indexes of the analyzed aggregation's growth, which at the same time measures the irregularity of the increase of the aggregate's components (Skrodzka, 2016, p.867-874).

$$V_{t,t+\tau}^i = \left[ \sum_{j=1}^k f_{j,t+\tau}^i \left( \frac{f_{j,t+\tau}^i}{f_{j,t}^i} - 1 \right)^2 \right]^{\frac{1}{2}} \quad (1)$$

where:

$f_{j,t+\tau}^i, f_{j,t}^i$  - the structure index in moments  $t$  and  $t+\tau$ ;  $j=1,2, \dots, k$  - components of the structure aggregate;  $i$  - object number.

$V_{t,t+\tau}^i = 0$  indicates the lack of change in the structure between periods. The higher the value of the measure, the more significant the structural changes.

In the next stage of the analysis we will compare the sector structure of the primary energy production in Poland with the sector structure in the whole European Union. Object similarity measure are used in analysis of this type (Malina, 2004). The measure is based on the value of the cosine of the  $\alpha$  angle measured between the  $U_{t1}$  i  $U_{t2}$  vectors characterizing the state of the structure in respective periods  $t1$  and  $t2$ .

$$\cos \alpha = \frac{\sum_{j=1}^k f_{j,t}^1 \cdot f_{j,t}^2}{\sqrt{\sum_{j=1}^k (f_{j,t}^1)^2 \cdot \sum_{j=1}^k (f_{j,t}^2)^2}} \quad (2)$$

where:  $f_{j,t}^1, f_{j,t}^2$  - components of the structure indexes vector respectively for Poland and the European Union.

The values of the measure are normalized, but to interpret the structures similarity assessment level, we consider the angle represented by the calculated cosine. A big  $\alpha$  spread between the  $U_{t1}$  and  $U_{t2}$  vectors means significant structure changes in period  $t2$  in comparison to the structure in period  $t1$ . A small spread of the angle indicates slight structure changes in the discussed periods. In an exceptional case, when the compared structures are identical, the angle between the structure vectors is 0. When the cosine value tends toward 0, which means the angle tends toward  $90^\circ$ , the vectors represent increasingly different structures. Arbitrary ranges determining small, medium or high structure similarity were set. The values of the cosine function for the division of a  $90^\circ$  angle into 3 equal parts were assumed as the ends of the ranges:  $[0, \frac{1}{2}]$ - big difference in structures;  $[1/2, \sqrt{3}/2]$ - moderate diversification of the

structures;  $[\sqrt{3}/2, 1]$ - high similarity. The function is not linear with respect to the angle, so we need to take caution expressing the size of structure changes in percentage. An analysis of the structure similarities in the selected EU countries and in Poland in the years 2010 and 2015 (Skrodzka, 2016, p. 263-273). The results of the calculations are shown in table 2.

**Table 2: The Similarity Values of the Primary Energy Production Structure of Selected EU-28 Countries in Relation to Poland in 2010 and 2015, and the Dynamics of Structural Change Intensity  $V_{2010/2015}$  in 2015 Compared to 2010**

Country	Poland		$V_{2010/2015}$
	2010	2015	
Bulgaria	0.777495	0.781997	0.167987
Poland	1	1	0.075112
Czech Republic	0.943404	0.908233	0.182427
Denmark	0.069608	0.092786	0.255603
Germany	0.751891	0.786667	0.239704
Estonia	0.990401	0.991679	0.022821
Ireland	0.898334	0.830205	1.044046
Spain	0.232128	0.182847	0.241812
France	0.023319	0.027585	0.015421
Croatia	0.115653	0.162508	0.648089
Italy	0.140252	0.162845	0.208962
Netherlands	0.070819	0.081989	0.250643
Austria	0.133936	0.157032	0.096197
Romania	0.547643	0.466436	0.126107
Finland	0.262761	0.259576	0.070476
Sweden	0.103897	0.110886	0.074527
United Kingdom	0.17907	0.196366	0.513112

Source: own elaboration based on Eurostat (2018)

The analysis revealed a close similarity of the Polish structure of primary energy production in 2010 to: the Czech Republic, Ireland, Estonia, and in 2015 only to the Czech Republic and Estonia. A moderate similarity in 2010 was observed in: Bulgaria, Germany, Romania, and Finland, and in 2015: Bulgaria, Germany, Ireland. The other discussed countries show bigger structural difference in comparison to Poland. The next step in the analysis was to determine the intensity of structural change in the examined period according to the formula (1). The values of the used measure of the intensity of structural changes in 2015 in comparison to 2010 for the selected EU-28 countries are presented in table 2. Disregarding the change route and focusing on the two points in time it is possible to state that compared to 2010 in 2015 the majority of measure results have similar and quite low values which means a low intensity of change in the analyzed structures. The dynamics of change were more intense in: Ireland, Croatia and United Kingdom.

## 6. Conclusion

The paper presents the concept of sustainable development of energy industry as a process of sustainable, secure and effective supply of energy which is a significant element of sustainable development. It offers a comparison of leading indicators of the development of sustainable

energy in the area of sustainable consumption and production, climate and energy change and sustainable transport. One of the principal indicators for monitoring sustainable consumption and production of electric energy is the consumption of energy in households per capita. The lowest values of the indicator in 2015 was observed for Romania 2,2 GJ and Poland 2,7 GJ, the highest for Sweden 15,8 GJ, Finland 13,7 GJ and France 8,2 GJ. In the area of monitoring climate and energy change in 2015 the majority of countries saw a decrease in the total emission of greenhouse gases compared to the emission in the base year which means they realized their obligations to reduce greenhouse gases to support sustainable development. In the group of the analyzed countries, the lowest emission in 2015 compared to the base year was observed in: Romania 41,85%, Estonia 42,33%, Bulgaria 46,33%. The highest occurred in: Spain 115,84% and Ireland 107,68%. In the analyzed group of countries the share of energy from renewable sources in gross final energy consumption is constantly growing. The lowest share of renewable energy was observed in Spain (5,8%) and United Kingdom (8,2%), the highest in Sweden (53,9%), Finland (39,3%), Austria (33,0%) and Denmark (30,8%). The share of RES in gross final consumption often differs from the share in primary production. The study also analyzes the structure of primary energy production in sectors and its dynamics in Poland, and compares it to the structure in selected European Union countries in the years 2020 and 2015. It was discovered that the examined structures differ considerably and realize the set climate goals to a different extent. The Polish individual goal on the share of RES is 15% in 2020, and in 2015 it reached 11,8%. The most significant changes in the structure in the analyzed period took place in Ireland, Croatia and United Kingdom. Environment is the foundation for the functioning of the economy and society, and society is fundamental to the development of economy. The indicators of the sustainable development of energy are the background and a basis of information on a country's energy situation. They show socio-economic context which determines the progress in pursuing and reaching the sustainable development of energy industry which is an integral part of the European Union Strategy for Sustainable Development.

## References

- [1] Commission Staff Working Document (2016): *Communication on 'Clean Energy For All Europeans*[online]. [cit.2018-02-22]. Available at:<https://ec.europa.eu/energy/en/news/commission-proposes-new-rules-consumer-centred-clean-energy-transition>
- [2] *Commission green paper - A European Strategy for Sustainable, Competitive and Secure Energy* (COM(2006)0105) (2006),[online]. [cit.2018-02-22]. Available: [www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P6-TA-2006](http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P6-TA-2006).
- [3] *Energy indicators for sustainable development: guidelines and methodologies*, (2005), International Atomic Energy Agency, Vienna [online]. [cit.2018-01-17]. Available: [https://www-pub.iaea.org/MTCD/Publications/PDF/Pub1222\\_web.pdf](https://www-pub.iaea.org/MTCD/Publications/PDF/Pub1222_web.pdf)
- [4] Eurostat , *Sustainable Development Indicators*, (2017), , [online]. [cit.2018-01-17]. Available:<http://ec.europa.eu/eurostat/web/sdi/indicators>
- [5] Graczyk A., (2017), Indicators of sustainable energy development, *Optimum. Studia Ekonomiczne*, vol. 4(88), pp.53-68
- [6] Hammond G.P., Jones C. I., (2011), Sustainability criteria for energy resources and technologies, In *Handbook of Sustainable Energy*, I. Galarraga, M. Gonzales-Eguino, and A. Marakandya, Eds. Cheltenham: Edward Elgar.

- [7] Lemaire X., (2004), Glossary of Terms in Sustainable Energy Regulation, *Renewable Energy and Efficiency Partnership*, Centre for Management under Regulation, Warwick Business School, University of Warwick.,
- [8] LG Action, (2009), *Project definition of sustainable energy*, [Online]. [cit.2018-01-17]. Available: <http://www.lg-action.eu/index.php?id=7292#23896>.
- [9] Malina A., (2004). *Multidimensional analysis of the spatial diversification of the Polish structure of the economy by voivodeships*. Wydawnictwo Akademii Ekonomicznej w Krakowie, Kraków
- [10] Mitchel C., (2010), *The Political Economy of Sustainable Energy*, Palgrave Macmillan UK, Basingstoke, pp. 9.
- [11] Our Common Future, (1987), World Commission on Environment and Development, United Nations, chapter 2, p. 1, [online]. [cit.2018-01-17]. Available: <http://www.un-documents.net/ocf-02.htm>
- [12] Patterson W., (2009), Keeping the Lights On. Towards Sustainable Electricity, *Earthscan*, London, p. 14.
- [13] Prandecki K., (2014), The Theoretical Basis of Sustainable Energy, Energy and Environmental Engineering, *Studia Ekonomiczne*, vol. 166, Katowice, pp. 238-248
- [14] Rogall H., (2009), *Nachhaltige Ökonomie. Ökonomische Theorie und Praxis einer Nachhaltigen Entwicklung*. Metropolis Verlag.
- [15] Rutkowski J., (1981) Similarity of structures and structural changes - questions of quantification. *Wiadomości Statystyczne*, vol. 8.
- [16] Sahabmanesh, Aref, Saboohi, Yadollah, (2017), Model of sustainable development of energy system, case of Hamedan, *Energy Policy*, 104, issue C, pp. 66-79
- [17] Skrodzka W., (2016), Analysis of the Structure of Primary Energy Production in Poland against the European Union In *3rd International Conference on European Integration*, Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp.867-874
- [18] Skrodzka W., (2016), Measuring the Similarities and the Dynamics of Structural Changes in Primary Energy Production in Poland in the Light of the EU Environmental and Climate Goals., *Zeszyty Naukowe Politechniki Śląskiej. Organizacja i Zarządzanie*, 1964, pp.263-273.
- [19] Štreimikienė, D., Ališauskaitė-Šeškienė, I. (2016). Comparative assessment of external costs and pollution taxes in Baltic States, Czech Republic and Slovakia. *E a M: Ekonomie a Management*, 19(4), pp. 4-18
- [20] Tester J.W., Drake E.M., Golay M.W., Discoll M.J., Peters W.A., (2005), Sustainable Energy, Choosing Among Options, *The MIT Press*, London.
- [21] UNDP, (2000), *World Energy Assessments Energy and the challenge of sustainability*, UNDP, UNDESA, WEC, New York
- [22] Włodarczyk A., (2016), The Assessment of Market Risk for the Socially Responsible Companies in the Background of the EU Climate Policy., In *3rd International Conference on European Integration*, Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp.1086-1095

## **Brexit: Questions, Dangers, Opportunities for Europe**

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### **Abstract**

*Until the 23 June 2016 referendum, the European integration was characterized by continuous development, progress, and deepening. The possibility of a disintegration had, however, been opened up by the Treaty of Lisbon in 2007. As the latter having been drafted with the idea that Article 50 would never be used, there is a lack of in-depth schemes to allow the Brexit process to be smoothly managed. In such a situation, much depends on whether the negotiating parties have the necessary trust in each other and intent to optimize their future relationship. Today, it is quite unpredictable where negotiations will end up. But wherever they'll end up, lessons could already be drawn from why they had started and how they are being conducted. Concerning the future, as a 'cliff-edge' scenario would cause enormous harm to both the UK and the EU, the only reasonable guiding principle for them should be to act in accordance with the economic and social well-beings of the people they represent: i.e. to put aside perceived political interests, and focus on protecting jobs and businesses.*

**Keywords:** *Brexit, car industry, financial services, value chains, withdrawal negotiations*

**JEL Classification:** *F02, F13, F15*

### **1. Introduction**

The day of the Brexit referendum (23 June, 2016) undoubtedly represents a milestone in the history of the European Union: after decades of deepening and enlarging, this was the first time people of a sovereign member state decided to leave the integration. It is not yet clear whether Brexit means a turning point – in that it will trigger a process of disintegration – or provide an opportunity for the remaining EU27 to engage in a stocktaking exercise and consider alternatives for Europe's future.

Our aim with this paper – after giving a short literature review – is to highlight the main risks associated with the significant differences in the UK's and the EU' approach to the withdrawal negotiations on one side, and what such differences could lead to, i.e. a no-deal scenario, on the other. By using the critical analysis method and drawing from across the spectrum of economic activities the examples of car industry and financial services, identified as two of the sectors being among the most sensitive to changes in UK-EU trade relations, we demonstrate that a no-deal scenario would be a disaster, and a hard-Brexit would result in a lose-lose situation for both sides. To avoid this, we suggest to take the most sensitive sectors away from the general scope of the future agreement and negotiate a special deal for them.

## 1.1 Literature

Literature on the consequences of Brexit started to surge well before the referendum, and the momentum continues to this day. A common feature of all these contributions is that they have been producing estimates without knowing anything about how the future relationship between the EU and the UK will look like. Hence their tendency to focus on some headline outcomes like an X or Y percentage fall in economic growth, household income, foreign trade or business investment by a given year (typically by 2030). These papers depart from the assumption that the UK will, under any scenarios, inevitably suffer from Brexit. They usually consider three different scenarios: a 'soft' or optimistic one, under which the UK would maintain substantial access to the single market (Norway or Swiss model); a 'hard' or pessimistic one, with no deal at all at the end of the Article 50 negotiations whereby trade between the UK and the EU would fall back to WTO terms; and a 'semi-hard' one, lying somewhere in between the two extremes (Dhingra et al. 2016; Schoof et al. 2015).

Some early analyses on Brexit even contained guesses on both short and longer term, the latter being devoted to the three above scenarios, the former predicting uncertainties, holding back spending decisions and deterring FDI (Kierzenkowski et al. 2016). The short run guesses did not really come true. An illustrative example of the relationship between econometric models and reality was when the Bank of England had to upgrade its forecasts for UK GDP growth for 2017 significantly for the second time in just six months, due especially to the resilience of consumer spending following the vote for Brexit: shortly after the referendum, in August 2016, it predicted the economy would expand just 0.8 per cent in 2017, while in its revised forecast, in February 2017, it said GDP would grow 2 per cent (Bank of England, 2017).

Another type of literature that developed since the Brexit vote consists of sectoral analyses which, like the general ones, know nothing about the nature of the future relationship between the EU and the UK. But since they are based on the worst case scenario, they have at least the advantage of giving serious warnings to decision-makers about the risks a no-deal scenario would entail. (For a more detailed account, see Chapter 3)

As for the literature dealing with disintegration, the paper of Vollaard (2008) concludes that the patterns of integration and disintegration being not evenly distributed across the region, it seems unlikely the EU would fall apart into Westphalian states. Auer (2010) argues that the attempt to move towards a more federalist Europe, as before, is no longer feasible, as populism and ethno-centric nationalism are emerging in Europe *not despite* but arguably *in response* to its elites' cosmopolitan agenda. Webber (2014) suggests that the future of the integration is highly contingent upon the rise of anti-EU movements and Germany's attitude. In this context, it is discouraging to see how much the economically resurgent Germany is clinging to that the Eurozone is managed according to its priorities. To the extent that Berlin tries to assert its influence over EU policies, resentments against Germany may increase in other members.

As for the author's publications on Brexit, following the referendum in June 2016, he and her colleague were amongst the first to provide a detailed analysis of the background to and the context of the Leave vote (Somai & Biedermann 2016). Their paper reviews the deeper societal and economic reasons behind the British choice to quit the EU. They conclude that increasing income and wealth inequalities, growing anti-elite sentiment in British society, and first of all a British approach to the rule of law that is fundamentally different from the continental one have contributed to the final result of the referendum, rather than immigration which, non the less, had a significant impact on employee's pay level in certain sectors and regions.

## 2. The Main Danger

Among the risks associated with Brexit the worst one is related to the difference in the parties' approach to the negotiations. As a matter of fact, it was clear from the outset that views of the British government and the Commission differ significantly as to what topics and in what order negotiations should be conducted on, and what could be considered to be a final output. In order to illustrate this danger of divergence between their approaches, it is worth recalling some of the parties' pre-negotiation statements.

From the guiding principles for Brexit talks, set out first in Prime Minister Theresa May's so-called Lancaster House speech (in January 2017) and confirmed in the British Government's White Paper (a month later), it was clear that Westminster formulated their strategic goals with the intention of maintaining many fundamental elements of the status quo and the closest possible tariff-free economic and trading relationship between the UK and the EU in the future. It would involve providing certainty and clarity for businesses through ensuring free trade with European markets, protecting workers' rights, promoting the UK's excellence in science and innovation, maintaining the 'mini-Schengen' regime of the British Isles (UK, Ireland, Channel Islands and Isle of Man), etc. According to the White Paper, Westminster is being interested in delivering a smooth and orderly exit from the EU on the basis that, unlike most trade negotiations, the parties have initially got the exact same rules, regulations and standards. So, talks should not be about bringing together two totally divergent systems but about managing the continued cooperation between the UK and the EU (May 2017; UK Government 2017).

By contrast, documents reflecting the EU's approach to Brexit negotiations – European Council Guidelines (Consilium 2017a) and Directives (Consilium 2017b) – showed that the Commission was not focusing on how to ensure the closest possible relationship with the UK after Brexit, but was up to something else. As for illustration, here are two quotations:

- 'A non-member ... cannot have the same rights and enjoy the same benefits as a member'
- '... the four freedoms of the Single Market are indivisible and ... there can be no "cherry picking".' (Consilium 2017a, p. 3)

While the first statement is difficult to argue with – especially as a non-member can obviously not take part for example in decision-making about working out EU-regulations, developing EU-policies, and cannot participate in talks about the future of the EU with the same rights as a member – the second one seems to be much more problematic. The premise whereby the EU's single market – freedom of goods, capital, services, and labour – are indivisible, has no economic foundations. Theory even suggests that the four freedoms can be substitutes. This is particularly true for trade and migration, as the quantity of work embodied in a country's imports have much the same effect on local wages as if those products and services were being produced by immigrant workers. It is, however, correct to say that trade and migration may also happen to be each other's complements rather than substitutes. Just think of exports that are often accompanied by supporting services. So, by trying to restrict free movement, the UK also restrict trade. But this is hardly a reason for the EU to cause further damage on both sides by imposing trade barriers through a hard Brexit (Kohler-Müller, 2017).

One of the main differences that have emerged between the EU and the UK concerns the interpretation of Article 50 of the Lisbon Treaty. According to paragraph 2, '... the Union [the EU] shall negotiate and conclude an agreement with the State [the UK], setting out the arrangements for its withdrawal, *taking account* of the framework for its future relationship with the Union.' In the Commission's interpretation this means that first a withdrawal agreement is to be reached, and then it comes to discuss about future relationship (see '*phased approach*' in Consilium 2017a p. 1; and Consilium 2017b, p. 4). By this logic, it would first

be established the amount the British should have to pay as an exit bill – the amount that the EU claims the UK must pay in order to settle its outstanding financial obligations – and only then can talks start on the details of how UK businesses might have access to the European single market. In the meanwhile, the British are of the view that in case of no agreement, all EU law will cease to apply and they would be subject to no enforceable obligation to make any financial contribution at all (House of Lords 2017, p. 3). Similarly, it may seem pointless from the EU perspective to force an early agreement on the avoidance of a hard Irish border, including any physical infrastructure or related checks and control, as long as nothing can be known about the arrangements that will regulate bilateral trade.

Although the British government's interpretation of Article 50 has always been quite different from that of the Commission – considering that '*taking account*' means a simultaneous rather than sequential approach – it did not, however, refrain from discussing certain issues (notably citizens' rights, Irish border, financial settlement, relocation of EU agencies from Britain) earlier than other ones (mainly future relationship). The difference in the parties approach to the negotiations can best be shown by the fact, that according to EU Guidelines it was up to the European Council to determine whether sufficient progress has been achieved before allowing the negotiations to proceed to the second phase. But never and nowhere had been said about what should be considered *sufficient progress*.

In the light of the above, it was an almost unexpected event when, in early December 2017, negotiators adopted a joint report on the progress they had made in the first phase of the talks, even if, due to the European Council's own caveat that *nothing is agreed until everything is agreed* (Consilium 2017a, p. 3), commitments set out in the report are not at all binding. Everything depends on whether the parties can come to a compromise about their future trade relationship during the second phase of the negotiations. Nevertheless, it is a bad omen for the future that on the very day (15 December 2017) when the European Council decided to move to the second phase of the negotiations, it also supplemented its negotiating directives in a way which has been highly debatable from a British viewpoint. Concerning the so-called transition period – aiming at facilitating for both citizens and businesses to adapt to the changes entailed by Brexit – it puts the UK on unequal footing:

- as for the obligations, the UK should be regarded as if it were still a member state ('*the acquis*' ... as well as '*any changes*' ... to it having '*automatically apply to and in the UK*');
- but as for the rights, the UK would '*no longer participate in or nominate or elect members of the*' ... EU '*institutions, nor participate in the decision-making or the governance of the*' ... EU '*bodies, offices and agencies*'. (Consilium 2018, pp. 6-7)

This would oblige the British government to accept that free movement from the EU27, as well as the supremacy of EU law and the competence of the Court of Justice of the EU would continue during the whole transition period. The UK would even be prevented to become bound by any international agreements, unless authorized to do so by the EU (Consilium 2018, p. 7). It is not only something which seems totally unacceptable for the British government, i.e. of changing from being an important rule-maker to being a simple rule-taker nation, but also something that literally contradicts paragraph 3 of Article 50 ('*The Treaties shall cease to apply to the State in question from the date of entry into force of the withdrawal agreement*').

Among the risks associated with Brexit, an overestimation – in theory by both sides, but in practice especially by the EU – of their perceived political interests, and putting these interests before the real social and economic interests of the peoples they represent, is probably the worst thing that could happen. If negotiators fail to recognize this danger, it is quite possible that parties may not reach an agreement by the 29 March 2019 deadline, or walk away from



the negotiating table earlier. Such a scenario would, however, cause enormous damage to the economies on both sides, particularly to internationally embedded sectors.

### **3. Sensitive Sectors**

The dismemberment of the value chain – i.e. the segmentation of the production of a product into different stages and the distribution of these segments among various countries in pursuit of greater efficiency and maximizing profit on the basis of differences in factor endowments of the countries – does advance specialization, but also heightens the interdependence of different markets.

In this context, Brexit puts value chains in a particularly delicate position. What seems to be clear since UK's Prime's Lancaster House speech (May, 2017) is that the fundamental reasons behind Britain's desire to pull out from the European Union – e.g. gaining back control over laws (ending the jurisdiction of the European Court of Justice (ECJ)) and borders (ending free immigration of persons from the EU) – will prevent the UK from continuing to participate in either the Single Market or the Customs Union. Since none of the EU's existing trade agreements with third countries can, without endangering Britain's interests, be applied to Brexit – for there is no way to run an autonomous trade policy; or borders cannot be easily crossed; or the agreement does not apply to agricultural and food products and/or services; or access to the EU markets is conditioned on a large amount of money to be paid into the common budget; or the jurisdiction of the ECJ is not ended; or a combination of all the above (Stojanovic & Rutter, 2017, p. 25) – it is no wonder the UK Government is seeking a bespoke arrangement with the EU, which would include both an 'ambitious and comprehensive Free Trade Agreement (FTA) and a new customs agreement' (UK Government, 2017, p. 35).

The probability of obtaining such a bespoke arrangement is, however, compromised by two problems. The first one derives from the fact that the more comprehensive and deeper the agreement, the greater the chances for the UK side to lose control over laws and regulations – while the British are just at pains to get it back again. The second one has already been mentioned: it comes from the EU negotiating guidelines whereby a non-member – who is not even willing to accept the bloc's four freedoms (notably the free movement of persons) – cannot expect to "cherry pick" what it likes and wants from the European integration.

The only way out of this situation lies – at least for sectors where a sudden change in the status quo would involve the greatest financial and social damage – in trying to take them away from the main body (the general scope) of the future agreement and negotiate a special deal for them. Naturally, this method only works if both parties get something out of it. Now, let us present here two such sectors: the automotive industry, a special treatment of which would be in the interests of both the UK and the EU 27, but with more damage prevented for the latter; and the financial services sector, for which the opposite is true.

#### **3.1 Car Industry**

Car manufacturing is one of the most globally integrated industries in the world. As for its weight in the UK, it employs directly 0.5 percent of the national workforce, contributes approximately 1 per cent of the GDP, accounts for 12 percent of total exports of goods, and invests a yearly amount of 2.5 billion pounds into R&D expenditure (all data are for 2015). If, however, the UK withdrawal were being done under a cliff-edge scenario, EU's WTO-tariffs on vehicles (10% for cars and 2.5-4.5% for parts) would put British exports at an immediate competitive disadvantage. Add to this the cost of customs checks at the border (€100-150 per

car) and a further 6 percent for the administrative and compliance costs of trade with the Union, to imagine delays and other damages such change would involve to the both *lean* and *just-in-time* production system of the automotive industry (SMMT 2016).

It's, however, not only the British car industry that would be seriously damaged. According to a recent study (Deloitte, 2017), if constructors passed all costs incurred by Brexit on to consumers, price for a car in the UK would increase by €3,700, and by as much as €5,600 for the ones manufactured in Germany (45% of German exports being premium models). As a result, the British market would shrink by 550,000 vehicles (-19%), of which 255,000 units (>46% of the decline) would have to be suffered by German constructors alone. In short, a cliff-edge scenario for Brexit would, by putting 18,000 jobs at risk, have a similar negative effect on German automotive industry as did the financial crisis in 2009.

All the above can, of course, be avoided if Brexit talks were conducted in the spirit of mutual goodwill. This should surely be a precondition not the least because the automotive industry – due to costs related to the technological constraints inherent in it – can *'only take (re-)location decisions once in the 7-year lifecycle of a new product'* (PwC, 2016). If there is no chance for a comprehensive free trade agreement being concluded by the leave date, one should perhaps look for a temporary sector-specific solution – e.g. by transforming UK production sites into special economic (i.e. duty-free) zones – in order to remove uncertainty for the industry and make sure that the investment cycle remains unbroken until a lasting solution can be found.

### **3.2 Financial Services**

The financial services industry directly provides 7 percent of the British GDP, and employs 1.1 million people. When related professional services (i.e. management consultancy, legal services and account services) are added, these data reach 11.8 percent of GDP and 2.18 million people or 7.4 percent of UK labour force. The larger 'industry' contributes £67 billion in taxes (or 11% of total UK tax receipts) and generates a trade surplus of £72 billion per year (all data are for 2014). Annual revenue from financial services are about £200 billion, of which 46-49 percent comes from domestic market, 21-23 percent relates to the EU, and the remaining 30-31 percent to the rest of the world (UK Parliament, 2016a, p.12).

The single biggest risk to the UK's financial services sector posed by Brexit comes from the uncertainty about whether and to what extent British businesses could retain access to the European single market. Ideally, they need two pieces of information: what the UK's future relationship with the EU will look like and what will be the bridge arrangement between leaving and getting to that relationship. In the absence of clarity, firms may preempt uncertainty by restructuring or relocating on the basis of a worst-case scenario. But not only the City would suffer, as one cannot with impunity (i.e. without the risk of increasing costs and complexities) unpick a highly developed ecosystem such as exists in London. The City has evolved over decades into what the profession recognizes as the world's leading financial center where hundreds of banks and thousands of different financial services companies are available to consumers, investors and businesses, and the significant interconnectedness of the different service providers enables the business sector to enjoy the efficiencies of scale stemming from the effect of compression, i.e. having all their transactions be packaged together, and having it all sitting on a single trading venue. In this environment, the concentration of capital, infrastructure and knowledge permits the companies to profit from the advantages of cost efficiency under unique conditions (UK Parliament, 2016b, pp. 5-11).

So, should the Commission attempts for example to repatriate the clearing of euro-denominated derivatives to the Eurozone, it will not only put at risk thousands of jobs in the

UK, but also increase the cost of trading for banks by several tens of billions of euro across a 5-year period following Brexit, i.e. a lose-lose situation for both the UK and the rest of the EU. The calculation is based on the assumption that fragmenting LCH's (London Clearing House, the world's largest clearing house) pool of interest-rate derivatives would change the price of every swap – the most commonly used type of contract – by one basis point (Hadfield, 2017).

As the financial services sector is becoming more and more globally organized – major players already responding to the Financial Stability Board, Basel, IOSCO and Dodd-Frank, etc. – and passporting rights might, in the foreseeable future, be replaced with globally regulated equivalence systems, it would be a workable way out of the Brexit dilemma, if the negotiating parties were reconciled themselves to the trend of globalization. Here again a more flexible approach could lead to a mutual recognition of each other's regulatory regimes.

#### 4. Conclusion

The process of the Brexit negotiations so far (slow progress and provisional solutions to certain chapters) show that the parties formulate their positions on the basis of fundamentally differing interests. The British want to change the EU-UK relationship only as much as they think to be necessary considering the results of the exit referendum and the essential points of the exit campaign, i.e. taking back control over laws and borders, and restricting contribution to the common European budget. However, the Commission, enjoying the confidence of the French-German tandem, and insisting on the dogma of the inseparability of the four freedoms, wants a significantly more distant relationship with the UK. It fears that if the British could arrange their withdrawal from the EU with no or minimal harm caused to their economy, i.e. an exit not deterrent enough to stop other member states from reconsidering their own situation within the club, this could lead to the total decomposition of the European integration.

Today, it is quite unpredictable where Brexit negotiations will end up. At any rate, it is scary to see how big the gap between the positions of the negotiating parties (presented in Chapter 2) still remains. Arising from the loss of a military and nuclear power, and the biggest advocate of liberal thoughts, damages to the EU, at least in the long run, could certainly appear at ideological, political and geopolitical level (Ševčíková, 2016). As for the economic level, the examples of car industry and financial services were chosen in this paper to demonstrate how a cliff-edge withdrawal of the UK from the EU would on either or both sides cause serious damage. Naturally, the list of the economic activities is much longer. One can for example mention the meat industry which would face the highest (on average close to 50%) tariffs of all sectors under WTO rules, consequently, leading to a greater disruption to trade flows than that caused by the Russian import ban in 2014, and a loss of at least 32,000 in the EU27 (UECBV 2017). Or, the fishing sector, one of the more contentious and complex question of which being the access to fisheries resources and repatriation of responsibility for regulation within the UK's 200 mile Exclusive Economic Zone (EEZ), having in mind that, yearly, EU27 boats catch seven times more fish by weigh (and five times by value) from the UK EZZ than UK boats do from the EU27 EZZ (Phillipson & Symes, 2018).

On the basis of the above, as neither party would benefit from an economic downturn in the other, negotiations should, in theory, focus on protecting jobs and businesses in the whole region, and thus head towards the best possible future relationship between the United Kingdom and the European Union. Unfortunately, as there is no guarantee such an optimistic scenario will happen, further research should be conducted in a wider range of sectors.

## References

- [1] Auer, S. (2010). 'New Europe': Between Cosmopolitan Dreams and Nationalist Nightmares. *JCMS: Journal of Common Market Studies*, 48(5), 1163-1184.
- [2] Bank of England (2017). *Inflation Report, Press Conference February 2017* [online]. [cit.2018-02-23]. Available at: <https://www.bankofengland.co.uk/inflation-report/2017/february-2017>.
- [3] Consilium (2017a). *European Council (Art. 50) guidelines for Brexit negotiations, 29 April 2017* [online]. [cit.2018-02-25]. Available at: <http://www.consilium.europa.eu/media/21763/29-euco-art50-guidelinesen.pdf>.
- [4] Consilium (2017b). *Brexit: Negotiating directives - 22 May 2017* [online]. [cit.2018-02-25]. Available at: <http://www.consilium.europa.eu/media/21766/directives-for-the-negotiation-xt21016-ad01re02en17.pdf>.
- [5] Consilium (2018). *Annex to the Council Decision supplementing the Council Decision of 22 May 2017* [online]. [cit.2018-02-26]. Available at: <http://data.consilium.europa.eu/doc/document/XT-21004-2018-ADD-1-REV-2/en/pdf>.
- [6] Deloitte (2017). *Brake Block Brexit – How a hard Brexit would impact the German automotive industry*. Brexit Briefing(5), June 2017 [online] [cit.2018-03-01] Available at: [https://www2.deloitte.com/content/dam/Deloitte/de/Documents/Brexit/Brexit-Briefings\\_Pt5\\_Hard-Brexit-German-car-industry.pdf](https://www2.deloitte.com/content/dam/Deloitte/de/Documents/Brexit/Brexit-Briefings_Pt5_Hard-Brexit-German-car-industry.pdf).
- [7] Dhingra, S., Ottaviano, G. I., Sampson, T., & Reenen, J. V. (2016). *The consequences of Brexit for UK trade and living standards*. Centre for Economic Performance, LSE (The London School of Economics and Political Science) Paper Brexit 02 [online]. [cit.2018-02-23]. Available at: <http://cep.lse.ac.uk/pubs/download/brexit02.pdf>.
- [8] Hadfield, W. (2017). LSE Raises Estimates for Loss of London Clearing to \$100 Billion. *Bloomberg*, May 22, 2017.
- [9] House of Lords (2017). *Brexit and the EU budget*. EU Committee 15th Report of Session 2016–17, 4 March 2017 [online]. [cit.2018-02-25]. Available at: <https://publications.parliament.uk/pa/ld201617/ldselect/ldeucom/125/125.pdf>.
- [10] Kierzenkowski, R., Pain, N., Rusticelli, E., & Zwart, S. (2016). The economic consequences of Brexit: A taxing decision, *OECD Economic Policy Paper*, April 2016, No. 16.
- [11] Kohler, W., & Müller, G. (2017). *Brexit, the four freedoms and the indivisibility dogma*. LSE Brexit. [online]. [cit.2018-02-23]. Available at: <http://eprints.lse.ac.uk/86187/1/brexit-2017-11-27-brexit-the-four-freedoms-and-the-indivisibility.pdf>.
- [12] May T. (2017). *Theresa May's Brexit speech in full* Lancaster House, 17 January 2017, [online]. [cit.2018-02-24]. Available at: <http://www.telegraph.co.uk/news/2017/01/17/theresa-mays-brexit-speech-full/>.
- [13] Phillipson, J., & Symes, D. (2018). 'A sea of troubles': Brexit and the fisheries question. *Marine Policy*. 90 (2018) pp. 168-173.
- [14] PwC (2016). *The impact of Brexit on the automotive sector*. PricewaterhouseCoopers, Brexit Monitor [online] [cit.2018-03-01] Available at:

- <https://www.pwc.de/de/automobilindustrie/assets/2016-11-15-brexit-topic-automotive.pdf>.
- [15] Schoof, U., Petersen, T., Aichele, R., & Felbermayr, G. (2015). Brexit–potential economic consequences if the UK exits the EU. *Bertelsmann Stiftung*, 8.
- [16] Ševčíková, M. (2016). Analysis of the Main Causes of Brexit and its Potential Consequences. In *International Conference on European Integration (ICEI)*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 961–969.
- [17] SMMT (2016), Society of Motor Manufacturers and Traders (SMMT) – Written Evidence (FTG0009) to the UK Parliament, 31 October 2016.
- [18] Somai, M., & Biedermann, Z. (2016). Brexit: Reasons and challenges. *Acta Oeconomica*, 66(s1), 137-156.
- [19] Stojanovic, A., & Rutter, J. (2017). *Frictionless trade? What Brexit means to cross-border trade of goods* Institute for Government [online] [cit.2018-03-01]. Available at: [https://www.instituteforgovernment.org.uk/sites/default/files/publications/5704%20IFG%20-%20Frictionless%20Trade%20Web\\_0.pdf](https://www.instituteforgovernment.org.uk/sites/default/files/publications/5704%20IFG%20-%20Frictionless%20Trade%20Web_0.pdf).
- [20] UECBV (2017). *The EU Meat Industry in a Hard Brexit Scenario* [online] [cit.2018-03-02] Av. at: <http://www.uecbv.eu/UECBV/documents/BrexitMeatreport12373.pdf>.
- [21] UK Government (2017). *The United Kingdom's exit from and new partnership with the EU White Paper*, February 2017, [online]. [cit.2018-02-24]. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/589191/The\\_United\\_Kingdoms\\_exit\\_from\\_and\\_partnership\\_with\\_the\\_EU\\_Web.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/589191/The_United_Kingdoms_exit_from_and_partnership_with_the_EU_Web.pdf).
- [22] UK Parliament (2016a). *Brexit: financial services*. European Union Committee, 9th Report of Session 2016-17, HL Paper 81, 15 December 2016.
- [23] UK Parliament (2016b). *Brexit and financial services in the UK*. Select Committee on the EU, Financial Affairs Sub-Committee, 14 Sep. 2016, Evidence Session No. 3.
- [24] Vollaard, H. (2008, September). A theory of European disintegration. In *Fourth Pan-European Conference on EU Politics, 25th–27th September*.
- [25] Webber, D. (2014). How likely is it that the European Union will disintegrate? A critical analysis of competing theoretical perspectives. *European Journal of International Relations*, 20(2), 341-365.

## Are They Different? A Behavioral Study of Digital Music Listeners in EU Context

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### **Abstract**

*The paper deals with analysis of consumer behaviour on the digital music market. The development of music industry over the last two decades is one of transformation: from physical to digital; downloads to streaming; ownership to access. The main goal is to investigate how such technological transformation has affected consumer behaviour of listeners across distinct age groups (Generation X and Generation Y) and across two EU markets (Czech, British). The study is based on on-line survey conducted in both countries. The findings indicate the substantial effect of age categories and country of residence on discussed attributes of consumer behaviour (intensity of listening to digital music, platform of listening to digital music, willingness of monthly payment for digital music). This article also discusses the tendency to pirate download.*

**Keywords:** digital music market, EU markets, Generation Y, Generation X, listeners

**JEL Classification:** M31, C83, C40

## **1. Introduction**

The development of the recorded music industry over the last two decades is one of transformation: from physical to digital; downloads to streaming; ownership to access. The industry is now working with its partners on another, ongoing transformation: from years of decline to sustainable growth.

### **1.1 The Characteristics of Digital Music Market**

In 2016, the global recorded music market grew by 5.9%, the fastest rate of growth since IFPI began tracking the market in 1997 (IFPI, 2017). This was a second consecutive year of global growth for the industry with revenue increasing in the vast majority of markets, including nine of the top ten. This growth, however, should be viewed in the context of the industry losing nearly 40% of its revenues in the preceding 15 years (IFPI, 2017).

In the last decade, digitization has dramatically affected most of the media industries. The traditional music storage style of the phonograph disk has been changed by digital storage, due to the new e-era digital technology and the micro - miniaturizing of music storage and playing devices. Consequently, the dissemination of music does not rely on the phonograph any longer. Instead, people can download music from websites or listen to music online (Lin, Shih, Tzeng, Yu, 2916). Digital technologies have allowed drastically reduce the costs of copying and disseminating information. In the case of the music industry, these costs reductions have led

to major gains for consumers who can now easily enjoy and benefit from a wider range of products at a minimal cost (Aguiar, Martens, 2016).

Elberse (2010) differentiates between three categories of product-service offered by the music industry: the physical album, the digital album and the digital single (or track). The first one is related to product and its sales are clearly decreasing (with some exceptions during Christmas periods). The second (also called bundled digital music) does not seem to have an important presence in the market. Finally, the evolution of the sale of digital music as a single song or track (unbundled music) is clearly dominant.

Streaming (unbundled music) has been the clear driver of growth on the digital music market with revenues surging by 60.4% (IFPI, 2017). With more than 100 million users of paid subscriptions globally, streaming has passed a crucial milestone. It makes up the majority of digital revenue, which, in turn, now accounts for 50% of total recorded music revenues (IPFI, 2017).

Music streaming services can be classified into different types according to their revenue model and streaming mode (Kim, Nam, Ryu, 2017). First, streaming services can be split by revenue source as an advertisement-based free model or a subscription-based streaming model. Streaming service providers can generate revenue by selling advertising while offering services free of charge or by charging a monthly subscription fee to users while providing streaming without advertisements (Wlomert & Papies, 2016).

Second, streaming services can be categorized as either streaming radio or on-demand streaming based on the kind of services they provide. Streaming radio allows users to choose among predetermined playlists, but they cannot listen to individual songs of their choice. On-demand streaming allows users to search and listen to individual songs of their choice in addition to choosing from predetermined playlists. Streaming radio services often employ the ad-based free model, for instance Pandora, while on-demand streaming services usually choose the subscription model, as in the case of Apple Music and Spotify (Kim, Nam, Ryu, 2017).

Parry, Bustinza, Vendrell-Herrero (2012) hold that subscription model in the music industry could take two forms, similar to mobile phone service contracts. First, "pay as you go" describes customers who are under no obligation or incentive to use the service and are free to choose when, where and how. They are paying only per downloaded track. The attractiveness of this business model is that in transactional terms it replicates the retail outlet experience and so can potentially remove some of the barriers to entry such as commitment to purchase or organizational membership. Second, "pay monthly" represents a model where the consumer commits to paying a monthly fee, potentially over a fixed period, and in return gains access to an allotted music service. In this business model, with increased usage unit price reduces to a point that should be lower than that of the pay as you go model, with a maximum limit to the monthly consumption. This business model supports increased consumption and relies on customers overestimating how much use they will make of the service.

Digital music industry faces big threat represented by illegal downloading of digital files. No longer limited to sharing physical copies, millions of virtual strangers can share music files via the Internet (Borja, Dieringer, Daw, 2015). This digital piracy decreases profits and earnings both record companies and artists, but most importantly, it distorts the dynamic market of digital music.

Digital music industry is protected in EU by some legal instruments, such as the Directive on the enforcement of intellectual property rights ('IPRED') which was adopted in April 2004 (European Commission, 2018). The Directive requires all EU countries to apply effective,

dissuasive, and proportionate remedies and penalties against those engaged in counterfeiting and piracy. Following the evaluation of IPRED, in November 2017 the Commission adopted the Guidance Communication clarifying the provisions of IPRED where there have been differing interpretations in EU countries. The guidance is based on ruling by the EU Court of Justice and best practice developed in EU countries (European Commission, 2018).

In April 2016, a joint study by the OECD and EUIPO (the EU Intellectual Property Office) was undertaken that illustrated an exponential growth of counterfeits and pirated goods worldwide. In particular, the OECD's estimates of counterfeit and pirated products have increased from \$250 billion in 2007, to up to \$441 billion in 2013, which represents approximately 2.5% of world imports (OECD/EUIPO, 2016). In the same year, imports of counterfeit and pirated products into the EU amounted to nearly \$116 billion, which represents up to 5% of EU imports (OECD/EUIPO, 2016).

### ***1.2 The Behaviour of Age Generations on Digital Music Market***

There has been a dramatic music retailing shift within the last decade. The post-war Baby Boomer generation born between 1945 and the early 1960s has preferred interpersonal, in-store purchase of records (or discs), while Generation Y (Gen Y) consumers, born from the 1980s onwards, sticks on digital file downloading of music files or tracks (Fjelstul et al., 2009; Roberts and Manolis, 2000, McIntyre, 2011). Generation is a key segmentation driver affecting behaviour on digital music market.

Generation is described as a group of individuals who are born in the same time period (Palese et al., 2006), have common geographical area and significant events (Kupperschmidt, 2000) and similar culture (Palese et al., 2006; Jain, Pant, 2012). Due to the same life span, each generation has gone through the same social events and external influences in their formative years, thus creating similar life experiences (Kupperschmidt, 2000; Jain, Pant, 2012). Crispell (1993) has classified six generations, but this contribution displays a shift in the digital music market between Generation X and Generation Y.

Squeezed between the Boomers and Millennials, Generation X is also known as Xers, Baby Busters (Kardes, Cronley, Cline, 2015). Members of this generation were born between 1965 and 1976. This generation is described as socially insecure and lacking in solid traditions (Jain, Pant, 2012). Generation X spends more time watching television and sharing their experience with their social group via media. Generation X uses email rather than social media such as Facebook (Strutton et al., 2011, Jain, Pant, 2012).

Generation Y are also known as Millennials (Klapilová Krbová, Velčovská, 2016). Generation Y consists of individuals born between 1976 and 1995. Members of Generation Y were influenced by these technologies during their adolescence and later, but using these technologies during their childhood was not usual (Pawlasová, Spáčil, Valečková, 2014). They are the most tech savvy generation and are online simply 24/7 (Pawlasová, Klézl, 2017). They focus on brands, friends and digital culture (Muskat, M., Muskat, B., Zehrer, Johns, 2013).

## **2. Problem Formulation and Methodology**

This paper explores the difference this move from product based to digital platforms has made for consumer groups. Since the rise of music on the internet the record industry has reported falling total sales revenues. This has occurred at a time when technology has radically



increased choice, availability and the opportunity for the consumer to purchase music (Parry, Bustinza, Vendrell-Herrero, 2012).

### **2.1 Problem Definition**

McIntyre (2011) has demonstrated the impact of age cohorts on the acceptance and perception of digital music. So, first goal is to investigate how such technological transformation has affected consumer behaviour of listeners across distinct age groups (Generation X and Generation Y). The second goal is to explore the behaviour of digital music listeners on two EU markets (Czech, British). UK market was chosen for survey because it belongs among the three largest performance rights markets (the revenue generated by the use of recorded music by broadcasters and public venues) (IFPI, 2017). Czech market is smaller market of post-communist country with some tendency to piracy of digital music streaming.

### **2.2 Research Methodology**

For this research on-line questionnaire has been applied. Forms by Google (for the British side) and website of VypInto.cz (for the Czech side) were used to collect all necessary data. The mix of convenience sampling and quota sampling has been selected as the most suitable type for this study. Quota was set for number of respondents from each country (100 respondents). Quota was kept on the British market, while number of respondents on the Czech market is slightly lower in comparison with plan (see Tab.1). The other segmentation criteria (gender and age) have not been under full control due to convenience sampling. But number of respondents in each subcategory is sufficient for cross tabulation. Sample size was 198 respondents.

**Table 1: Structure of Sample**

	<b>Male</b>	<b>Female</b>	<b>Gen Y</b>	<b>Gen X</b>	<b>CZE</b>	<b>UK</b>
<b>Absolute frequency</b>	74	124	137	61	93	105
<b>Relative frequency</b>	37%	63%	69%	31%	47%	53%

Source: own elaboration

Data collected from both countries were firstly edited and coded. Then data were analysed via statistical package of IBM SPSS Statistics version 25. All variables obtained from questions (preferred devices for listening to the music, downloading the digital music, preference of digital platform for listening to the music) were nominal (non-metric) so non-parametric tests were used for testing. Chi-square statistics was applied to test statistical significance (see Tables 3, 5 and 7) of the observed association in cross tabulations (see Tables 2, 4 and 6). It assisted us in determining whether a systematic association exists between two variables. First variable was always the attribute of consumer behaviour on digital music market, second one expressed gender, age cohort (generation) or country residence.

### **3. Problem Solution**

The results are structured into three sections: (1) preferred devices for listening to the music, (2) downloading the digital music and (3) preference of music digital platform.

### 3.1 Preferred Devices for Listening to the Music

Seven types of devices have been named as vehicles for listening to the music. Generally the respondents mostly prefer multifunctional devices (PC laptop, smartphone) (see Table 2). The importance of car stereo, radio and TV for listening is diminishing. The position of MP3 player is now marginal in comparison with the first decade of 21<sup>st</sup> century and practically has not been mentioned. There are two main reasons for sales decline. Firstly, if consumers don't listen to music that often, a smartphone will be more than good enough. Secondly, smartphones allow consumers listen to music from music subscription services like Spotify, Deezer, Tidal, Amazon Music or Apple Music (Hoffman, 2018).

**Tab 2: Preferred Devices for Listening to the Music Based on the Segmentation Criteria**

	Male	Female	Gen Y	Gen X	CZE	UK
<b>PC/laptop</b>	72%	77%	81%	56%	79%	70%
<b>Smartphone</b>	72%	74%	83%	42%	69%	77%
<b>Car stereo</b>	58%	44%	43%	67%	53%	45%
<b>Radio</b>	40%	44%	40%	51%	47%	39%
<b>TV</b>	24%	30%	24%	37%	32%	23%
<b>Tablet</b>	22%	15%	15%	29%	8%	28%

Source: own elaboration

There are not statistically significant gender differences concerning with preferred devices for listening at all (see Tab 3). The slight differences in preferences of devices between Czech and UK listeners have not been statistically proved just with the exception for tablet. The impact of generations on device preference is really strong and statistically justified (see Tab 3). Statistically significant differences are expressed by bold letters. For Generation Y smartphones and PC/laptops are decisive devices for listening to the music. Conversely, cars stereo is used as key device for generation X (see Tab 2). It should be also reasoned by higher level of car ownership among Gen X consumers.

**Tab 3: Significance Test for Differences in the Preference of Devices for Music**

	Gender differences	Age differences	Country differences
<b>PC/laptop</b>	0,463	<b>0,001</b>	0,196
<b>Smartphone</b>	0,745	<b>0,000</b>	0,208
<b>Car stereo</b>	0,084	<b>0,006</b>	0,258
<b>Radio</b>	0,615	0,197	0,279
<b>TV</b>	0,397	0,103	0,156
<b>Tablet</b>	0,245	<b>0,043</b>	<b>0,000</b>

Source: own elaboration

### 3.2 Downloading the Digital Music

Downloading digital music was measured on descriptive scale with for levels and was based on self-assessment of listeners. No matter the soft data has been used for finding the differences

in consumer behaviour the results display the substantial gap in the accepting digital music. Definitely, generation differences in preference of digital music are visible (see table 4) and also statistically proved (see Tab 5). 98% of respondents from Gen Y download digital music compared with of 71% of respondent from Gen X. Moreover, nearly quarter of consumers from Gen X do not plan to download digital music in the future.

**Tab 4: Downloading the Digital Music Based on the Segmentation Criteria**

	Male	Female	Gen Y	Gen X	CZE	UK
<b>Yes, I do it frequently</b>	72%	69%	88%	30%	69%	71%
<b>Yes, but not very often</b>	19%	20%	10%	41%	26%	14%
<b>No, but I will possibly do so in the future</b>	1%	2%	0%	7%	0%	4%
<b>No, and I have no plan to do so</b>	8%	8%	1%	23%	5%	10%

Source: own elaboration

Findings also show statistically confirmed country differences (see Tab 5). Although the share of frequent listeners of digital music is nearly the same in both countries (see tab 4), there are twice more moderate listeners in the Czech Republic. The share of listeners who refuse downloading digital music in future is slightly higher in UK than in Czech Republic (see Table 4).

**Tab 5: Significance Test for Differences in the Downloading the Digital Music**

	Gender differences	Age differences	Country differences
$\chi^2$ test	0,954	<b>0,000</b>	<b>0,037</b>

Source: own elaboration

### ***3.3 Preference of Digital Platform for Listening to the Music***

There are many digital platforms that constitute different categories of music consumption: music downloading (digital stores), music streaming (subscription services, social sound platform), music video streaming, and online radio. The downloading and streaming categories could be further divided into licensed and unlicensed websites (piracy download/copy).

Music videos generate definitely the decisive platform for each segment no matter of gender, age and country residence (see Tab 6). You Tube is a key brand of music videos channel. Tendency to pirate download is viewed namely among members of Gen Y and Czech listeners (see Tab 6) and is statistically confirmed (see Tab 7). From country point of view the more listeners use subscription services and digital stores the less they look for pirate downloading. Gen X was ready to buy vinyls and compact discs in past so they almost do not need download music in pirate way. Also members of Gen X prefer digital stores to subscribe services because they got to use to have the complete album of their favourite band or interpreter.

**Tab 6: Preference of Digital Music Platform Based on the Segmentation Criteria**

	<b>Male</b>	<b>Female</b>	<b>Gen Y</b>	<b>Gen X</b>	<b>CZE</b>	<b>UK</b>
<b>Music videos</b>	80%	85%	85%	77%	91%	75%
<b>Pirate download/copy</b>	53%	54%	62%	28%	62%	45%
<b>Subscription services</b>	33%	29%	37%	12%	19%	43%
<b>Online radios</b>	26%	27%	25%	33%	29%	24%
<b>Digital stores</b>	32%	16%	22%	23%	15%	30%
<b>Social sound platform</b>	23%	15%	20%	12%	13%	23%
<b>Other</b>	3%	2%	2%	5%	2%	2%

Source: own elaboration

**Tab 7: Significance Test for Differences in the Preference of Digital Music Platform**

	<b>Gender differences</b>	<b>Age differences</b>	<b>Country differences</b>
<b>Music videos</b>	0,469	0,213	<b>0,004</b>
<b>Pirate download/copy</b>	0,938	<b>0,000</b>	<b>0,024</b>
<b>Subscription services</b>	0,555	<b>0,002</b>	<b>0,001</b>
<b>Online radios</b>	0,826	0,318	0,447
<b>Digital stores</b>	0,017	0,842	<b>0,015</b>
<b>Social sound platform</b>	0,226	0,200	0,102
<b>Other</b>	0,601	0,229	0,982

Source: own elaboration

#### 4. Conclusion

The growing importance of digital music consumption calls for a better understanding of the relationship between the different consumption channels available to consumers. Nonetheless, it is ultimately consumer preferences that determine which business model will be successful and, consequently, in which direction the streaming industry will progress.

Findings have shown that age is a key indicator for display of listener behaviour. 98% of respondents from Gen Y download digital music in comparison with listeners from Gen X (71%). Both generations prefer almost different devices for listening and different digital music platforms. Country differences concern just with digital music platforms (see Tab 6). Gender differences practically do not exist only with exception of digital store preference.

Understanding the product attributes valued the most by consumers and segmentation profile will provide important insights into formulating an optimal business model and predicting the development of the digital music industry. The future of digital music industry strongly depends on level of music piracy (copying and downloading of music illegally) which is considered a serious problem. This is extremely concerning with Gen Y listeners and Czech listeners who admit higher level of illegal downloading. The problem of music piracy goes beyond the current dollar losses. It is also about the economic, legal, and social distortions, and the market inefficiencies anchored in the act of stealing copyrighted songs.

In order to combat music piracy, governments and the music industry should target young consumers regarding law and risk awareness, recognition of artists' harms and losses, and strengthen law enforcement (Borja, Dieringer, Daw 2015).

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### **References**

- [1] Aguiar, L. and Martens, B. (2016). Digital Music Consumption on the Internet: Evidence from Click Stream Data. *Information Economics and Policy*, vol. 34, pp. 27-43.
- [2] Borja, K., Dieringer, S. and Daw, J. (2015). The Effect of Music Streaming Services on Music Piracy among College Students. *Computers in Human Behavior*, vol. 45, pp. 69–76.
- [3] Crispell, D. (1993). Where Generations Divide: A Guide. *American demographics*, vol. 5 (5), pp. 9 – 11.
- [4] Elberse, A. (2010). Bye - bye Bundles: the Unbundling of Music in Digital Channels. *Journal of Marketing*, vol. 74 (3), pp. 107–123.
- [5] European Commission (2016). *Enforcement of Intellectual Property Rights*. [online]. [cit.2018-03-27]. Available at: [http://ec.europa.eu/growth/industry/intellectual-property/enforcement\\_en](http://ec.europa.eu/growth/industry/intellectual-property/enforcement_en).
- [6] Fjelstul, J., Severt, K. and Breiter, D. (2009). An Analysis of the Motivators and Inhibitors Affecting Association Meeting Attendance for Generation X and Baby Boomers. *Event Management*, vol. 13, pp. 31–41.
- [7] Hoffman, Ch. (2018). Should you Still Buy MP3 Players? *Make Use Of* [online]. [cit.2018-03-09]. Available at: <https://www.makeuseof.com/tag/should-you-still-buy-mp3-players/>
- [8] IFPI (2017). *Global Music Report. Annual State of Industry*. [online]. [cit.2017-03-09]. Available at: <http://www.ifpi.org/downloads/GMR2017.pdf>.
- [9] Jain, V. and Pant, S. (2012). Navigating Generation Y for Effective Mobile Marketing in India: a Conceptual Framework. *International Journal of Mobile Marketing*, vol. 7 (3), pp. 56 – 65.
- [10] Kardes, R. F., Cronley, L. M. and Cline, T. W. (2015). *Consumer Behaviour*. Mason: South-Western Cengage Learning.
- [11] Kim, J., Nam, Ch. and Ryu, M. H. (2017). What do Consumers Prefer for Music Streaming Services? A Comparative Study between Korea and US. *Telecommunications Policy*, vol. 41, pp. 263–272.

- [12] Klapilová Krbová, P. and Velčovská, Š. (2016). Shopping Typology of Generation Y in the Czech Republic and Slovakia. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 443-454.
- [13] Kopperschmidt, B. (2000). Multi-generation Employees: Strategies for Effective Management. *The Health Care Manager*, vol. 19, pp. 65–76.
- [14] Lina, Ch. L., Shih, Y. H., Tzeng, G. H. and Yu, H. Ch. (2016). A Service Selection Model for Digital Music Service Platforms Using a Hybrid MCDM Approach. *Applied Soft Computing*, vol. 48, pp. 385–403.
- [15] McIntyre, Ch. (2011). News from Somewhere: The Poetics of Baby Boomer and Generation Y Music Consumers in Tracking a Retail Revolution. *Journal of Retailing and Consumer Services*, vol. 18, pp. 141–151.
- [16] Muskat, M., Muskat, B., Zehrer, A. and Johns, R. (2013). Generation Y: Evaluating Services Experiences through Mobile Ethnography. *Tourism Review*, vol. 68 (3), pp. 55-71.
- [17] OECD/EUIPO (2016). *Counterfeit and Pirated Trade: The current picture*. [online]. [cit.2018-03-27]. Available at: [https://ec.europa.eu/growth/content/counterfeit-and-pirated-trade-current-picture-0\\_en](https://ec.europa.eu/growth/content/counterfeit-and-pirated-trade-current-picture-0_en).
- [18] Palese, A., Pantali, G. and Saiani, L. (2006). The Management of a Multigenerational Nursing Team with Different Qualifications. *The Health Care Manager*, vol. 25 (2), pp. 173–193.
- [19] Parry, G., Bustinza, O. F. and Vendrell-Herrero, F. (2012). Servitisation and Value Co-production in the UK Music Industry: An Empirical Study of Consumer Attitudes. *International Journal Production Economics*, vol. 135, pp. 20–32.
- [20] Pawlasová, P., Spáčil, V. and Valečková, J. (2014). Image of the European Union Perceived by Generation Y. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 524-533.
- [21] Pawlasová, P. and Klézl, V. (2017). Factors affecting Generation Y Customers' Satisfaction with Online Group-Buying Purchases in South Korea. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, vol. 65 (6), pp. 2045 – 2054.
- [22] Roberts, J.A. and Manolis, Ch. (2000). Baby Boomers and Busters: an Exploratory Investigation of Attitudes toward Marketing, Advertising and Consumerism. *Journal of Consumer Marketing*, vol. 17 (6), pp. 481-497.
- [23] Strutton, D., Taylor, G. D. and Thompson, K. (2011). Investigating Generational Differences in e-WOM Behaviours for Advertising Purposes, does X = Y? *International Journal of Advertising*, vol. 30 (4), pp. 559-586.
- [24] Wlomert, N. and Papies, D. (2016). On-demand Streaming Services and Music Industry Revenues – Insights from Spotify's Market Entry. *International Journal of Research in Marketing*, vol. 33 (2), pp. 314–327.

## Public Debt in the European Union: A Sleeping Giant?

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### **Abstract**

*In spite of a recent slight recovery in the European Union, some issues such as very high public debt to GDP in some EU member countries remain also in post-crisis period. Public debt has become a highly debated economic issue in recent years due to the European debt crisis, which was especially strong in euro area countries. Reduction of the excessive public debt has moved to the forefront among the economic policy challenges facing many of European Union countries in recent years. An accumulation of high levels of public debt can have severe negative consequences. One of them is a negative correlation between debt and economic growth as most existing empirical literature on this object has found. Sustainability of the debt depends not only on its size, but also on its structure. The structure of public debt may become a channel or source of vulnerability to the real economy and the financial system. In this respect, this paper analyses debt decomposition – residency of creditors, currency which is used to issue debt and original maturity of debt instrument – on recent available data. According to our findings, the debt share held by non-residents was significant for most of the European Union countries; only two countries issued more than 50% of their debt in foreign currency and the long-term securities were the most used debt instrument.*

**Keywords:** *currency, economic growth, euro area, European Union, debt holders, debt-to-GDP ratio, maturity, public debt, sovereign debt crisis, structure of public debt*

**JEL Classification:** *E62, H63, O40*

### **1. Introduction**

In 2008, the world economy faced its most dangerous crisis since the Great Depression of the 1930s. The outbreak of the financial crisis very negatively afflicted economic agents in many countries. The crisis has been unusual in its global nature, affecting advanced countries and countries integrated, with the euro area most affected. Initially, this crisis hit the real economy, which suffered from the failure of large financial institutions, and later expanded its influence on state finances. In this regard, the financial crisis in Europe has transformed into a sovereign debt crisis, beginning in 2009, and has an effect on most EU Member States. The government debts in many European countries began to rise and peaked in 2014, when reached on average 91.8% of GDP in the euro area and 86.5% in European Union as a whole. Such debt levels can carry risks for economic growth prospects and financial stability. However, there are also additional potential risks arising from a structure of public debt. Therefore, the aim of this paper is to analyse debt decomposition – residency of creditors, currency, which is used to issue debt and original maturity of debt instrument – on recent available data for European Union countries. These are information useful in assessing debt sustainability.

The rest of the paper is organized as follows. Section 2 describes European sovereign debt crisis and evolution of public debt in European Union during 2002-2016. Section 3 presents the decomposition of public debt in European Union according to debt holders, currency denomination and financial instruments and their maturity on data from 2016. Section 4 concludes.

## **2. Development of Public Debt in European Union**

In 2007, EU economies, on the surface, seemed to be doing relatively well – with positive economic growth and low inflation. Public debt was often high, but (apart from Greece) it appeared to be manageable assuming a positive trend in economic growth. However, with a recession that hit European countries, state finance in some countries collapsed.

### **2.1 European Sovereign Debt Crisis**

The European debt crisis was a series of debt crises that began with the global financial crisis of 2008 and hit several Eurozone members. It started in 2009 when Greece announced its actual budget deficit was 12.9% of gross domestic product, more than quadruple the 3% limit mandated by the European Union. Credit rating agencies lowered Greece's credit ratings. Investors responded by demanding higher yields on Greece's bonds, which raised the cost of the country's debt burden and necessitated a series of bailouts by the European Union and European Central Bank. The markets also began driving up bond yields in the other heavily indebted countries in the region, anticipating problems similar to what occurred in Greece. The Greek debt crisis soon spread to the rest of the Eurozone, since many European banks had invested in Greek businesses and sovereign debt. In three years, debt crisis escalated into the potential for sovereign debt defaults from Portugal, Italy, Ireland and Spain.

In 2010 the European Union and International Monetary Fund disbursed 110 billion euros in loans over three years to Greece. In 2011, Greece's creditors agreed to take a large haircut on their debt of 53.5% of the face value to avoid a disorderly default by Greece on its debt. The first bailout was followed by two more, - in February 2012 (130 billion euros) and July 2015 (86 billion euros distributed through 2018). In 2017, tensions over Greece's third bailout grow as the IMF warns that the country's debt is unsustainable (Saini-Davies, 2017).

Other countries, like Ireland, Portugal, and Italy, had also overspent, taking advantage of low-interest rates as Eurozone members. As Lane (2012) points out, Spain was a little different. The government had been fiscally responsible, but the 2008 financial crisis severely impacted its banks. They had heavily invested in the country's real estate bubble. After Spain joined the euro, the country experienced a long boom, underpinned by a housing bubble, financed by cheap loans to builders and homebuyers. House prices rose 44% from 2004 to 2008, at the tail end of a housing boom. Since the bubble burst they have fallen by a third. The size of the banks' problems and a recession, that hit Spanish economy, meant the country had to turn to its fellow Eurozone members for help. By 2012, Spain was forced to request a bailout, and EU leaders agreed to use Eurozone funds (100 billion euros) to provide the Spanish government to recapitalize its struggling banks. The loans will come from Eurozone funds set up to help members in financial distress: the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM).

According to Whelan (2015), a similar situation also occurred in Ireland. Ireland had combined a long period of high economic growth and low unemployment with budget surpluses. A population growing, incomes expanding rapidly and historically low interest rates, increased



demand for housing. The acceleration in housing activity after 2002 was largely financed by the Irish banks. As house prices fell in 2007, the collapse in housing construction occurred and unemployment jumped, resulting in a large loss in income tax revenues. The bursting of the bubble in the real estate market turned to a banking crisis in 2009. In 2010, economic growth was significantly negative, the budget deficit was out of control and the debt to GDP ratio had risen to over 100%. Therefore the European Union, International Monetary Fund and the Irish state agreed to a €85 billion rescue deal made up of €22.5 billion from the IMF, €22.5 billion from the European Financial Stability Facility, €17.5 billion from the Irish sovereign National Pension Reserve Fund (NPRF) and bilateral loans from the United Kingdom, Denmark and Sweden.

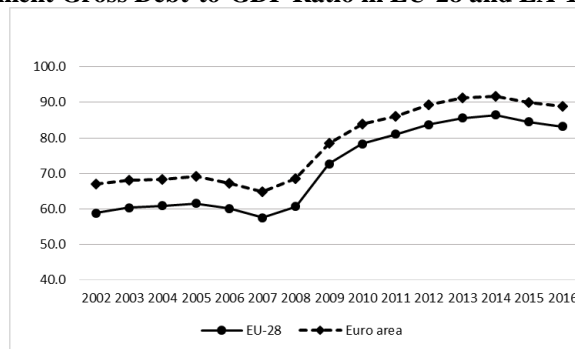
In the Portugal, financial crisis worsened the current crisis of Portuguese economy that has begun in 2002. With decreasing of interest rates, the degree of public and private indebtedness reached very high levels. Portuguese government bond yields raised to unsustainable levels as Fitch and Standard & Poor's cut their ratings of Portuguese sovereign debt in March 2011 (De Santis, 2012). In April 2011, Portugal became the third European Union country to apply for EU and IMF financial assistance worth 78 billion euro to help it cope with its budget deficit. In 2013, the Portuguese government approved more spending cuts, mainly affecting public-sector employees' wages, conditions and pensions, in order to avoid a second international bailout.

While the Eurozone debt crisis has been a factor, Italy's problems are more fundamental with the economy having grown little since the introduction of the Euro in 1999. Since joining the Euro, Italy has seen its relative competitiveness decline. However, in addition to these weaknesses, the rapid increase of the Italian state's indebtedness has rendered the country's fiscal position unsustainable. Italy crossed the 100 per cent debt-to-GDP-ratio threshold. This led investors to view Italian debt bonds as a risky asset. The austerity packages (spending cuts) followed, nevertheless, the Italian debt continued to rise and Italy recorded the government debt equivalent to 132 percent in 2016. (Engler and Klein, 2017)

As will be clear from the analysis above, the sovereign debt crisis is deeply connected with the banking crisis and macroeconomic imbalances that afflict the euro area. According to Lane (2012), there are three phases in the relationship between the euro and the European sovereign crisis. First, the initial institutional design of the euro plausibly increased fiscal risks during the pre-crisis period. Second, once the crisis occurred, these design flaws amplified the fiscal impact of the crisis dynamics through multiple channels. Third, there were also the restrictions imposed by monetary union. Crisis management institutions were also missing.

## ***2.2 Development of Public Debt in 2002 - 2016***

In the years before the outbreak of the crisis, average public debt-to-GDP ratio in EU reached values around the level of Maastricht criteria. The average level of public debt-to-GDP ratio in euro area was higher by approximately ten percent. Just before the outbreak of the crisis in 2005-2007, ratios of public debt was decreased. In 2007, public debt in the euro area reached on average 64.9% of GDP and in the whole European Union 57.5%. When the crisis started to impact the euro area, its Member States reacted with important stimulus packages and injections of public money into their banking systems (see part 2.1), which in many countries increased public debt and deficit well beyond the Maastricht reference values. Public debt continued to increase as a result of the measures taken during the crisis, in 2014, it peaked at 91.8% of GDP on average in the euro area and 86.5% in European Union as a whole (see Figure 1). Since then the public debt has declined slightly.

**Figure 1: Government Gross Debt-to-GDP Ratio in EU-28 and EA-19, 2002 - 2016**

Source: Eurostat (2018), author's elaboration

Public sector deficits and the burden of the public debt are once again at the centre of macroeconomic policy debate. However, the high public debts are not new phenomenon in some European countries, as we can see in Table 1.

**Table 1: Public Debt to GDP Ratio, 8 EU Member States, 1910 - 2015**

	1910	1930	1950	1970	1990	1995	2010	2015
<b>Austria</b>	67.1	19.3	22.1	10.6	46.0	67.9	82.4	84.3
<b>Belgium</b>	49.6	57.5	73.7	48.3	106.6	130.5	99.7	100.6
<b>France</b>	79.6	142.9	27.4	12.4	35.2	55.8	81.6	95.8
<b>Germany</b>	46.6	n.a.	17.5	17.4	41.0	54.8	80.9	70.9
<b>Italy</b>	76.2	111.4	32.3	30.9	96.3	116.9	116.5	131.5
<b>Netherlands</b>	70.0	75.6	141.0	49.6	75.8	73.5	59.3	64.6
<b>Spain</b>	89.7	58.9	46.2	18.0	42.6	61.7	60.1	99.4
<b>Sweden</b>	16.6	17.3	36.5	26.8	41.2	69.5	38.6	44.2
<b>Average</b>	61.9	69.0	49.6	26.7	60.6	78.8	77.4	86.4

Source: 1910-1990: Salsman, R. M. (2017); thereafter, Eurostat (2018)

Table 1 provides more historical context on public debt, depicting trends in public debt/GDP ratios for eight EU Member States over the past century. These countries reached the lowest levels of debt in the 1970s, nearly 27 percent in average. We can see in Table 1 that some countries like France, Italy and Netherlands had public debts sometimes over a one hundred percent early 20<sup>th</sup> century. It is known that governments incur most of their debt during or immediately following major wars and use peacetime conditions to reduce the debt-output ratio. However, the public debts increased also in the peaceful period after World War II. In 1980s, it was due to recessions accompanied by government deficits. In 1990s, a debt growth was conditioned also by the political-budget cycles. According to Janků (2016), the existence of the political-budget cycles causes significant macroeconomic losses, e. g. an unnecessary increase in the government deficit and debt at the time of the elections. Author claims that some of the EU Member States with a lower credibility and transparency of fiscal policy - Czech Republic, Estonia, Hungary, Italy, Poland, Portugal, Slovakia and Slovenia - are particularly vulnerable to the political-budget cycle.

The situation worsened even further after the outbreak of the financial crisis. In recent years, the highest debt ratio from these eight European countries is that of Italy, nearly 132 percent

in 2015, increased more than four times from 1970. The second largest ratio in 2015 is in Belgium, about 100 percent, more than double its level in 1970. Sweden had the lowest debt ratio (at 44.2 percent) in 2015, approximately the same as in 1990. Average debt of this eight countries was near 27 percent in 1970 and higher by 60 percent in 2015 (86.4%).

### **3. Structure of Public Debt in the European Union Countries**

Eurozone debt crisis have necessitated the revival of the academic and policy debate on the impact of growing debt levels on economic growth. Most studies on relationship between public debt and growth, for example Reinhart and Rogoff (2010), Kumar and Woo (2010), Schclarek (2004), have found a negative impact of high public debt on long-term economic growth. Kramolišová and Spáčilová (2015) examined this relationship on the sample of 27 EU countries and also found negative relationship. Some studies were looking for a threshold over which additional debt has a negative impact on economic growth. Checherita and Rother (2010) investigated the relationship on the sample of 12 euro area countries and determined the threshold at about 90-100% debt-to-GDP ratio. Baum et al. (2013) found on same sample the threshold above 95%. Cecchetti et al. (2011) obtain a threshold for government debt at 85 % of GDP. Up to threshold, additional debt has a stimulating impact on growth, as found, for example, by Hsing (2017) for Poland, for which the current level of the debt-to-GDP is sustainable.

#### ***3.1 Analysis of Risks Arising from the Debt Structure***

The impact on the economy of the indebted countries has not only the amount of debt but also its structure. There are several macroeconomic reasons for attaching importance to the composition of government debt. The composition of government debt in terms of maturity, currency and investor base influences both a government's costs and the risks related to the rollover of outstanding government debt. Melecký and Melecký (2015) state that good government debt management reduces the country's vulnerability to financial crisis and financial risks. According to them, the debt management costs are usually high and limit the available sources for the other purpose. Quality debt management can minimise the costs in view of the risks related to the issuance of government debt.

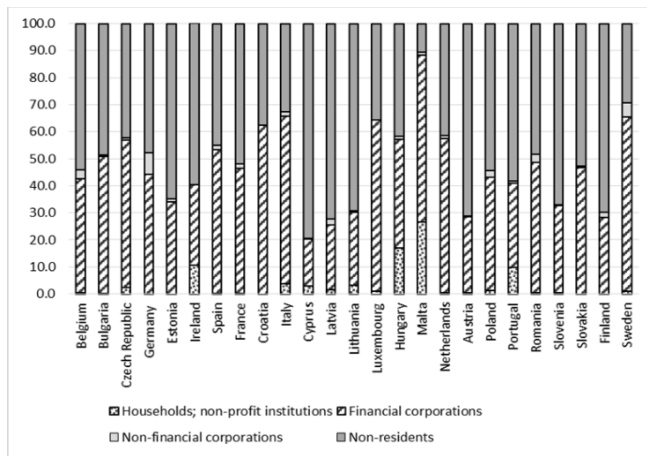
Murín (2017) studied the effects of three public debt decomposition – original maturity of debt instrument; currency which is used to issue debt and the residency of creditors – on economic growth. His results suggest that the most important shift seems to be from domestic to foreign creditors which is associated with the higher economic growth rates. Similar but not as strong effects, he obtained for the shift from domestic to foreign currency and for the shift from long term debt instruments to short term debt instruments.

Knowing who holds the debt is important for assessing whether debt flows involve a net transfer of external resources across countries and assess whether holders are likely to be subject to panic attack and lead to runs on a country's public debt. A large share of public debt in hands of non-residents may be a sign of confidence in well-performing economy. The currency of denomination is important for determining the risk of currency mismatches, and maturity is important for determining rollover and interest rate risk.

At the end of 2016, the debt share held by non-residents was significant for most of the countries but highly variable between countries. Among EU Members (see Figure 2), the share of public debt held by non-residents was highest in Cyprus (79%), followed by Latvia (72%), Austria (71%), Finland (70%) and Lithuania (69%). The lowest share has Malta – 10.5%. In

contrast, the largest proportion of debt held by the resident financial corporations sector countries for which data is available was recorded in Sweden (64%), Luxembourg (63%), Croatia, Italy and Malta (all 62%). In most countries, less than 10% of debt was held by the resident non-financial sectors (non-financial corporations, households and non-profit institutions serving households), with the noticeable exceptions of Malta (28%), Hungary (18%), Ireland and Portugal (both 11%).

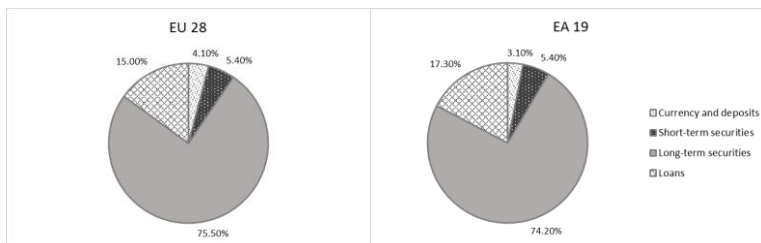
**Figure 2: Government Gross Debt by Sector of Holder in EU-28, 2016, Percent**



Source: Eurostat (2018), author’s elaboration

A domestic currency denomination of debt protects country against exchange rate movement risks. The euro is the domestic currency for the euro area countries. In 2016, 100% of the stock of government debt was denominated in euro for Belgium, Estonia, Luxembourg and Finland. Another euro area countries, except Lithuania and Latvia, issued more than 90% of their debt in euro as domestic currency. The domestic currency is the major issuing currency also for some non-euro countries - Denmark (98.7 %), Sweden (90.6 %), Poland (72.8%), the Czech Republic (56.0 %) and Romania (50.5%). Only two countries issued more than 50 % of their debt in foreign currency: Bulgaria (80.5 %) and Croatia (76.5 %).

**Figure 3: Government Gross Debt by Financial Instrument in EU-28 and EA-19, 2016**



Source: Eurostat (2018), author’s calculations

Looking more closely at the composition of financial instruments in Figure 3 for the EU-28, 15.0% of the general government debt was made up by loans, 4.1% by currency and deposits, 80.9% was made up by debt securities at the end of 2016. In the euro area, public debt decomposed in financial instruments has similar structure (see Figure 3). For most of EU

Member States, the most used debt instrument remained debt securities. The smallest share of debt in securities has Estonia (11.1%), the highest share has Malta (93.3%), Czech Republic (90.8%) and United Kingdom (88.1%). The second most important instrument are loans, and this is particularly true for Estonia (86.6%), Greece, (80%) and Cyprus (67.3%). Significant loan to total debt ratios were also recorded for Luxembourg (39.8%), Portugal (35.5%) and Croatia (35.2%). Higher ratios of loans in Greece, Cyprus and Portugal are related to loans of EFSF, ESM and other international assistance.

Composition of debt in terms of financial instruments is related to debt maturity. As we can see in Figure 3, long-term securities, i.e. securities with initial maturity of over one year, represented 75.5% of government debt in European Union, while short-term securities accounted for 5.4% in 2016. The maturity composition of government debt affects the yield curve and hence the financing conditions of the private sector, with possible effects on overall economic activity. The maturity of debt also affects an ability to repay debt. Equiza-Goñi (2016) in his analysis suggests that extending debt maturity in 2013-2015 would result in lower debt ratios by 2022. A large share of short-term public debt indicates higher rollover risk. This risk exists for most EU countries except Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Luxemburg, Poland and the Slovak Republic (< than 1% of debt in short-term securities). Hungary has the highest ratio of debt with short-term maturity (15.3%).

#### 4. Conclusion

A rising debt burden has implications for the economy in the shape of a greater amount of resource allocation towards debt servicing in the future. In order to meet debt servicing obligations, an extra burden is placed on limited government resources and may costs in the shape of foregone public investment or expenditure in other sectors of the economy. However, according to Vološin and Vološinová (2016), the current stage of development is characterized by the persistence of certain models of economic policy, even if they already do not provide adequate solutions to current problems. Also, more research needs to be undertaken in the field of public debt and its structure.

Hence, alongside the level of the debt ratio, analysis of the composition of government debt (debt maturity, residency of holders, currency denomination) is also warranted. According to our findings, the debt share held by non-residents was significant for most of the European Union countries; only two countries issued more than 50% of their debt in foreign currency and the most used debt instrument are long-term securities. Most European Union Members which have a large stock of long-term domestic currency debt hold by foreign holders are less vulnerable to financial crises. There is only one country with vulnerable structure of its debt (short-term maturity, foreign currency denomination, resident holders) – Romania.

#### References

- [1] Baum, A. et al. (2013). Debt and Growth: New Evidence for the Euro Area. *Journal of International Money and Finance*, Volume 32, pp. 809-821.
- [2] Cecchetti, S.G. et al. (2011). The Real Effects of Debt. *BIS Working Papers*, No. 352.
- [3] Checherita, C. and P. Rother. (2010). The Impact of High and Growing Government Debt on Economic Growth: An Empirical Investigation for the Euro Area. *ECB Working Papers*, No. 1237.
- [4] De Santis, R. A. (2012). The Euro Area Sovereign Debt Crisis: Safe Haven, Credit Rating Agencies and the Spread of the Fever from Greece, Ireland and Portugal, *ECB*

- Working Paper*, No. 1419. [online] [cit. 2018-01-19]. Available from Internet: <http://www.econstor.eu/bitstream/10419/153852/1/ecbwp1419.pdf>.
- [5] Equiza-Goñi, J. (2016). Government Debt Maturity and Debt Dynamics in Euro Area Countries. *Journal of Macroeconomics*, vol. 49, pp. 292-311.
- [6] Enkler, P. and M. Klein. (2017). Austerity Measures Amplified Crisis in Spain, Portugal, and Italy. *DIW Economic Bulletin*, No. 8, pp. 89-93.
- [7] Eurostat (2018). *Statistics* [online]. [cit.2017-09-22]. Available at: <http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/themes>.
- [8] Hsing Y. (2017). Is more government debt or currency depreciation expansionary? The case of Poland. *Theoretical and Applied Economics*. Volume XXIV, No. 3, pp. 63-70.
- [9] Janků, Jan. (2016). Podmíněný politicko-rozpočtový cyklus v zemích OECD. *Politická ekonomie*. Vol. 64, No. 1, pp. 65-82.
- [10] Kramolišová, V. and Spáčilová, L. (2015). Public Debt and Economic Growth in European Union Countries. In *Proceedings of the 13th International Conference „ECONOMIC POLICY IN THE EUROPEAN UNION MEMBER COUNTRIES“*. Ostrava: VSB – Technical University of Ostrava, pp. 304-314.
- [11] Kumar, M. S. and J. Woo. (2010). Public Debt and Growth. *IMF Working Paper No. WP/10/174*.
- [12] Lane, P.R. (2012). The European Debt Crisis. *Journal of Economic Perspectives*, vol. 26, no. 3, pp. 49 – 68.
- [13] Melecký, A. and Melecký, M. (2015). *Řízení vládního dluhu: Strategie, riziko, alokace*. SAEI, vol. 40. Ostrava: VŠB-TU Ostrava.
- [14] Murín, M. (2017). Can Shifts in Public Debt Structure Influence Economic Growth of Advanced Economies? In *35th International Conference Mathematical Methods In Economics*, Conference Proceedings. Hradec Králové: Gaudeamus, University of Hradec Králové, s. 492-498.
- [15] Reinhart, C.M. and K. S. Rogoff. (2010). Growth in a Time of Debt. *NBER Working Paper No. 15639* [online] [cit. 2018-01-17]. Available from Internet: <http://www.nber.org/papers/w15639.pdf>.
- [16] Saini-Davies, P. (2017). *Crisis in Greece*. New York: Oxford University Press.
- [17] Salsman, R. M. (2017). *Political Economy of Public Debt. Three Centuries of Theory*. Edward Elgar Publishing.
- [18] Schclarek, A. (2004). Debt and Economic Growth in Developing and Industrial Countries. [online] [cit. 2018-02-11]. Available from Internet: [http://project.nek.lu.se/publications/workpap/Papers/WP05\\_34.pdf](http://project.nek.lu.se/publications/workpap/Papers/WP05_34.pdf).
- [19] Vološin, M. and Vološinová, D. (2016). Alternative Views on the Debt Financing of Public Sector in the EU. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 1078–1084.
- [20] Whelan, K. (2015). Ireland's Sovereign Debt Crisis. University College Dublin *Working Paper No. 11/09* [online] [cit. 2018-01-11]. Available from Internet: [http://www.ucd.ie/t4cms/WP11\\_09.pdf](http://www.ucd.ie/t4cms/WP11_09.pdf)

## **Migration Policy in the European Union – Methodological Modification of Psychosemantic Methods**

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### **Abstract**

*This scientific study reflects and investigates presented attitudes of political leaders of Slovak republic, that deal with the topic of migration in European medial context perceived by young voters (February 2018). We focus on the way this topic is presented in a European context by three topmost constitutional actors – president, prime minister and chairman of parliament. We investigated, by the method of semantic selection, the semantic maps of voters to political leaders/constitutional actors in relationship to the topic of migration and receiving of refugees. To mark the relationship of political representatives to the researched topic, we have chosen commonly known phrasemes, denoting character, personality and intellectual traits of a human being. The results of psychosemantic methods allow for detection of hidden, implicit meanings and help in this way to predict or correct voter's preferences.*

**Keywords:** migration, phrasemes, political communication, semantic maps, the European Union

**JEL Classification:** F02, F51, C90

### **1. Discursive Media Strategies on Migration in the European Context**

The aim of the present paper is to identify the social representation of the relation of political leaders in the Slovak Republic (President Andrej Kiska, Prime Minister Robert Fico, Head of Parliament Andrej Danko) and the political topic of security and migration in the EU context. Based on the results of qualitative analysis of the media discourse of the above political leaders in the period from July 2017 to January 2018 and the results of a modified semantic selection test, we are trying to identify the stance of the politicians in relation to the issue of migration in the semantic field of adolescents.

The issue of increasing migration is alive even after 3 years of international efforts to tackle and stabilize this socio-economic problem in the European context. In the years 2015-2016 there was an increasing “securitization” of the migrants on the part of the Slovak government, i.e. the influx of the refugees was primarily presented as a security risk regardless of their humanitarian needs and regardless of the fact that in the newly-approved Migration Policy of Slovak Republic with a perspective up to 2020 (2011) the government declared that “the Slovak Republic is in favor of an integration model based on bilateral adaptation in the integration process, in which the aliens contribute to shaping the common culture and the majority respects and supports their diversity”. The publicly presented views of the politicians on the social networks were mostly negative, as claims e.g. Chudžíková in the analysis of political and media discourse on the refugees in Slovakia (Hlinčíková and Mesežnikov, 2016, p. 95-111).

The politicians often used a combination of the so-called symbolic and realistic threats (Hlinčíková, Chudžíková, Gallová Kriglerová and Sekulová, 2016) – fear of the demise of what is known as the Slovak culture, fear of the economic threats, and after the events in Paris and Cologne, a perceived fear of death of the inhabitants of Slovakia. In addition to an exceptionally strong stereotypical patterning and homogenization of a large group of people only on the basis of their (purported) religion we can also observe a significant long-term dehumanisation of the refugees (Divinský, 2007; Vašečka, 2009; Žuborová and Borárosová, 2016). It is clear from the hitherto surveys of public opinion that a majority of Slovak citizens are mostly afraid of the refugees and do not support their arrival to Slovakia (Gažiová and Rapošová, 2016). The society still resonates with a vague and false perception of foreigners linked with the absence of perception of migration as a tool to counter the effects of a demographic and economic crisis (Vašečka, 2009, Spálová and Szabo, 2016). In the research conducted in September 2015 within the framework of the initiative Invitation to Humanity, the Slovak population showed low satisfaction with the participation and contribution of the Slovak Republic in the solution of the so-called refugee crisis. This corresponds with the findings of J. Androvičová (2015) who based on the approach of G. Campesi (2009) identified two key strategies in the criminalisation of the refugees resulting from the safety discourse. The first strategy can be labeled a “cultural threat” strategy, and it is built mainly on the differences in culture the migrants come from, and in highlighting the culturally contingent characteristics, which are often generally associated with negative activities (e.g. violent acts, crime). The second strategy is the so-called “security risk” strategy, which focuses on efforts to control crime through dividing the migrants into legal and illegal. We have also noted a significant shift in the rhetoric, manifesting itself as a transition from controlling to management of migration (Geiger and Péroud, 2010; Betts, 2008). The aim of migration management is not only to avoid the arrival of the migrants, but to regulate migration in such a way that it is “for the benefit of all”. The said dominant discursive strategies disseminated by the media have a negative impact on adopting the integration measures and creating an inclusive society (Gažiová and Rapošová, 2016).

In the recent period we marked a gradual reduction of the media coverage of security and migration, with the representatives of EU member states presenting themselves through seeking a uniform approach to the solution based on the defined aid, solidarity and regulation of the coming migrants. In view of the above, we wanted to map the perception of the relationship of Slovak constitutional politicians to migrants in the target group of adolescents.

## **2. Research Study - Relationship of the Political Elites to Migrants in the Semantic Area of University Students**

To identify the social representation of the relation of the Slovak political leaders/elites and the political topic of security and migration in the semantic area of university students, we used a psycho-semantic method – semantic selection test (hereinafter SST). When using SST, we focus on how the respondents view themselves and persons and things around in their semantic areas (Urbánek, 2003). In this area, every object has its place depending on its importance to the respondent. SST works with two types of elements, which will be called stimuli/terms and attributes/images. Both elements are “meaningfully charged” from the respondent's perspective. The respondent assigns attributes to the individual terms based on his/her own beliefs, emotions and associations.

In the original version of the SST, the attributes are rendered with 16 semantic pictures (house, flower, water, sun, lips, fish, eye, boat, moon, knife, bar, grave, spider web, snake, tree, worm). In this research study we present a modification of the SST, more specifically, its experimental



version using idioms and lexical phrases instead of the standard images, as they reflect human characteristics, nature and abilities (Habovštiaková and Krošlaková, 1996). Within the framework of the test structure, we replaced the attributes/images with phrasemes, which reflect human qualities and reflect the personal traits of an idealized concept a political leader, or traits that are undesirable and do not support the concept of a strong political brand. For this reason, we provisionally preselected phraseological antonyms with opposite meanings because they are connected by one semantic concept – in this case a property or ability (Ripka and Imrichová, 2003). The proposed approach is based on the assumption that phrasemes can be used to explicitly label the personality traits and abilities of political leaders. An important criterion is the referential nature of phrasemes in relation to the subject of research and the image of political leaders as perceived by the respondents. The selection was made from the lexical fields/fields of discourse in the Phraseological Dictionary (Habovštiaková and Krošlaková, 1996). Based on these fields of discourse we selected antonymous phrasemes for the respondent to select from, and we created a modified version of the test (the letter next to the phraseme represents the indication on Figure 1):

- 1) He wouldn't hurt a fly. (A)/A leopard cannot change its spots. (J)
- 2) He stands behind every word he says. (F)/He has a skeleton in the cupboard. (I)
- 3) He is a person of good repute. (K)/They pick on him. (B)
- 4) He can put two and two together. (M)/He has bats in the belfry. (E)
- 5) He is a recognized expert. (O)/He does not have a clue. (D)
- 6) He keeps his fingers on the pulse. (C)/He is buttoned-down. (G)
- 7) He speaks from the heart. (N)/He preaches water, but drinks wine. (P)
- 8) He is a yapper. (L)/He speaks words of wisdom. (H)

The usability of these phrasemes may be limited by their knowledge in the target group, therefore, we considered it appropriate to avoid phrasemes of a biblical origin, which might not be known by the youngest generation. A similar presumption was applied to the phrasemes from the Greek and Roman mythology because the respondents might have a limited knowledge of these units.

When setting the operational strategy to deal with the research problem, we used the theoretical concepts of medial discursive strategies and prior empirical knowledge on the subjective perception of the efficiency of use of the political leaders instead of the party (Spálová, 2015; Spálová and Szabo, 2017).

In the modified SST we have proposed to monitor the relationships (semantic maps) of the following terms:

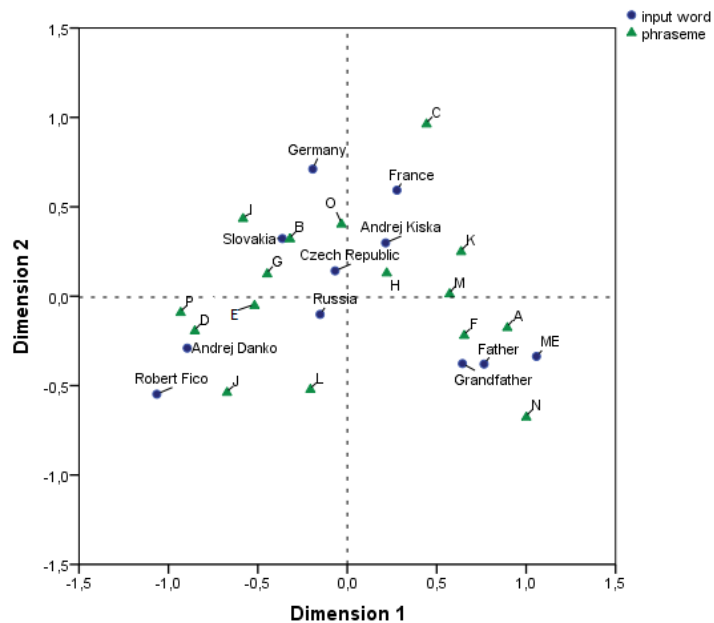
- Terms with affinity to migration - in relation to select EU countries: Slovakia, Czech Republic, Germany, France, Russia,
- Reference terms with the generational factor: myself, grandfather, father
- Political/constitutional leaders and their use of personalization: Robert Fico, Andrej Danko, Andrej Kiska (the selection of the political leaders was based on the popularity and preferences of the selected politicians from the pre-election surveys (e.g. AKO, Polis, Focus) (TASR, pravda.sk, 2018)).

The research file consisted of the students in the field of marketing communication and advertising at the Faculty of Arts, Constantine the Philosopher University in Nitra in January 2018. The research was attended by 77 respondents – 18 men and 59 women.

### 3. Results

We used correspondence analysis to process the statistical data from the Semantic Selection Test. The closer the points on the chart, the higher the similarity between the corresponding categories. It is also possible to interpret groups of similar categories in relation to the position of the points relative to the main axes. The justification for the correspondence analysis method was examined on the basis of the result  $\chi^2$  - independence test. We rejected the null hypothesis on independence between the stimuli terms and phrasemes with the significance level less than 0,001 and we adopted an alternative hypothesis: the stimulation terms and phrasemes are dependent. Ten dimensions were extracted in the correspondence analysis. For a more appropriate visual representation, we will only work with two dimensions. The first dimension contributes with a value of 0.163, which represents an inertia of 65%, the second dimension contributes with a value of 0.03, which represents an inertia of 12%, for a total inertia of 77%. The correlation between the two extracted dimensions is close to zero ( $r = 0.096$ ).

**Figure 1: Perception of the Slovak Political Leaders/Elites to Migration Evaluated by Correspondence Analysis (Complete Set)**



Source: own elaboration (2017)

The reference term *myself* is in the quadrant of positive identification together with the generational overlaps, and it stands close to the terms *father* and *grandfather*. This quadrant is saturated by phrasemes *He stands behind every word he says*, *He wouldn't hurt a fly* and *He speaks from the heart*. We have observed a more desirable/ideal self-concept of the adolescents, i.e. what I would like to be; and these results indicate a greater tolerance of the migrants in the younger generation but at the same time stand contrary to the findings regarding the negative attitude to migrants in the Slovak population (Vašečka, 2009; Euractiv.sk, 2017).

Positive anchoring in relation to migrants is seen in the terms *Andrej Kiska* and *France*. The following phrasemes are associated with these terms: *He keeps his fingers on the pulse*, *He is*

*a person of good repute, He speaks words of wisdom, He can put two and two together.* The phraseme *He is a recognized expert* is in a close quadrant, but its nearest term is Andrej Kiska. Andrej Kiska speaks neutral to positive in the context of migration. According to his statements on the Facebook profile (during the observed period between July 2017 and January 2018), he views migration as a current EU problem along with security, climate change, all of which the country cannot deal with separately, but only in cooperation with other countries, particularly with the EU countries (October 23, 2017). In general, he calls for tolerance, solidarity and humanity. On December 19, 2017, right before Christmas, Kiska published a write-up on the dinner with Assyrian Christians who immigrated to Slovakia because of the Iraq war. Kiska did not advocate directly for receiving the refugees, but presented the family of Assyrian Christians as hardworking, good and diligent people. The neighbors first did not trust them, but later developed good relations with them (about trust see e.g. Fichnová, Wojciechowski and Mikuláš, 2018). Kiska tried to point out the prejudice against migrants because they also include decent people who are fleeing from war. This position corresponds with the migration policy in some EU countries. For example, France prefers the assimilation model to the discriminatory model – “...expects that the foreigners fully drop their native language and cultural & social characteristics and quickly assimilate into the majority society in return for a speedy acquisition of citizenship and the rights & duties it entails” (Nová, 2016, p. 674).

The third quadrant is anchored by the following EU countries: *Germany, Slovakia and the Czech Republic*. In relation to migrants, the countries are associated on the adolescent semantic map in conjunction with the following phrasemes: *He has a skeleton in the cupboard. They pick on him. He is buttoned down.* In contrast with the first quadrant, we can see the critical approach of adolescents to migration policy reflecting the mistrust in the solution of the migration issues by the political representatives of the countries concerned. Germany has welcomed the highest number of refugees (approximately 1 million). “The current disaster faced by refugees and forced-migrants in the aftermath of the Arab Spring is a dreadful illustration of persistent ambivalences: The Federal Republic, in the post-Nazi era and the European Union from its very inception, proclaim allegiance to human and citizens' rights, which serve, in ones and the same time to promulgate the promise of inclusion and equality, and as instruments of securitization and exclusion” (Banai and Kreide, 2017, p. 903). As a matter of comparison, the Czech Republic has taken a minimum amount of refugees, but the migration is resonating equally strong. „The Czech Republic has also begun to discuss its national interests, drawing on several conflictual moments in Czech history, at the moment of deepening the European integration in the late 1990s. ... The specific historical development including post-war national homogenization influenced also discussion about immigration policy on the national level. For the majority of the inhabitants of the EU European identity does not represent a strong enough identification. One of the consequences thus seems to be the rise of nationalistic movements which list the protection of a supposedly endangered national identity as the main goal of their activities“ (Nenička, 2016, p. 662). Kohoutek (2013, p. 106) argues that based on the current available data, more than a threat, immigration has become a securitized issue.

The most salient negative connotations are anchored in the fourth quadrant, and they include the explicitly negative phrasemes: *He preaches water, but drinks wine. He does not have a clue. He has bats in the belfry. A leopard cannot change its spots. He is a yapper.* associated with the political elites *Robert Fico* and *Andrej Danko* and reflect the negative perception of the adolescents. The said is also indicated by the perceived populism, corruption, lack of competence, and manipulation in the political marketing of Slovak political elites. On his Facebook profile (monitored in the period July 2017 to January 2018), Robert Fico regularly informed about the G4 summits, and expressly dismissed the compulsory quotas and the

creation of uniform Muslim communities in Slovakia (January 26, 2018). He stressed the joint decisions of the EU countries and notional overlaps. In the write-up about the EU and Africa summit, he once again stood up against migration and pointed out that the problem must be addressed directly in the country of origin, and the role of the EU is to help these countries at home (December 2, 2017). In Fico's opinion, a substantial part of migration is economic-based (January 26, 2018). He addressed this issue in a write-up titled "Slovak work for Slovaks" - "I do not want Slovakia to end up like Brussels – full of immigrants from foreign countries. I want that work is first and foremost given to the Slovaks who can increase their living standards." January 23, 2018). Migration was one of his main topics in the 2016 election campaign although the refugees did not pass through Slovakia and we only adopted a limited amount of migrants (Onderčanin, 2017). Fico also claimed that the migrants who came to Greece and Italy did not want to come to and stay in Slovakia. For Andrej Danko, the issue of migration was interesting in the later periods, e.g. on June 10, 2017 he issued a warning that Slovakia would be swept by thousands of migrants and it must implement a system of protection, e.g. compulsory military service, because of the coming "natural disasters" (SITA, 2017). In 2016 he often talked about the planned prohibition of burkas, about the failure of the EU in the area of security – particularly in the context of the Berlin attacks. Currently, Andrej Danko only rarely expresses his views on migration.

#### 4. Conclusion

The aim of the present paper was to identify the social representation of the relation of political leaders in the Slovak Republic (President Andrej Kiska, Prime Minister Robert Fico, Head of Parliament Andrej Danko) and the political topic of security and migration in the EU context using a modified semantic selection test. The semantic maps of adolescents reflect the significantly negative associations of the political elites in the Slovak Republic with the exception of the President of the Slovak Republic Andrej Kiska and the EU countries – Slovakia, Czech Republic and Germany, with the exception of France.

The results of this semantic selection test were complemented by a qualitative analysis of the statements made by the politicians on their official Facebook profiles. We followed their media discourse primarily in the period from July 2017 to January 2018. Based on the analysis of Fico's media discourse, his statements on migration can be seen in the context of the joint European solutions. "Several authors (e.g. Geiger and Pécoud 2010; Betts 2008) noted a major turnover in the migration discourse. They characterize it as a transition from migration control to migration management. In their view, the promotion of the so-called migration management is a split from the specifically defined and safety-oriented migration policy. The aim of migration management is not only to avoid the arrival of migrants, but to regulate migration in such a way that it is 'for the benefit of all' " (Androvičová, 2015, p. 335). Here lies the main difference between the official policy toward the EU and the statements to local general public stemming from the national policy. Fico's statements developed the migrant discourse as a threat to national security, which resulted in Fico's efforts and emphasis on dealing with migration and refugees in the European context since, in his view, the danger applies to all European countries, as well as the global migration discourse. "Major findings highlight the lack of symbolisms inside institutions to raise their standards and place European Union as identity superpower, even though they take significant initiatives to use the refugees/migrants crisis, with one and only purpose: Strengthening social relations between the state-members of the Union" (Remanda, 2017, p. 153). The discourse of fear is also strong in other European countries, and it affects the law, order, and religious and cultural differences (Bolonyai and Campolong, 2017), which requires a response with specific solutions (Stevens, 2017).

Andrej Danko made only a few statements on migration policy in the second half of 2017, but in the preceding period he used a national security concerns discourse – just like Fico.

Kiska addressed the topic of migration in a neutral manner, he took it as a current problem in the European Union along with security and climate change, which the country cannot battle separately, but only in cooperation with other countries, particularly those from the EU. Similarly to Robert Fico, he pointed that safety is a priority of the state. The migration phenomenon coupled with the negative consequences of the economic crisis has led to the strengthening of racist, xenophobic and intolerant ideas, hoisted by the parties of the European extreme right handgrip found in sectors of the population (Busutil and Marquez, 2017). In contrast, he calls for tolerance and, using the example of the Assyrian Christian family, develops the discourse of migrants being victims, "having no other choice", and being a benefit.

The media play a key role in the creation of opinions and attitudes toward social issues in the young generation (Štrbová, 2016). "Media still are the main means of information with regards to distant topics (the refugee crisis included) and facilitators of people's access to social reality." (Buturoiu, Stefanita and Corbu, 2017, p. 20). The results indicated a link between the anti-migration media comments by Robert Fico and Andrej Danko and their negative perception by the adolescent youth, and the neutral statements by President Andrej Kiska, and his implicit pro-immigration attitudes were perceived positively by the adolescent youth.

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### **References**

- [1] Androvičová, J. (2015). Sekuritizácia migrantov na Slovensku – analýza diskurzu (Securitisation of migrants in Slovakia - Discourse Analysis). *Sociológia*, vol. 47, iss. 4, pp. 319-339.
- [2] Banai, A. and Kreide, R. (2017). Securitization of migration in Germany: the ambivalences of citizenship and human rights. *Citizenship studies*, vol. 21, iss. 8, pp. 903-917.
- [3] Betts, A. (2008). *Global Migration Governance*. GEG Working Paper 2008/43. Oxford: Department of Politisc and International Relations.
- [4] Bolonyai, A. and Campolong, K. (2017). "We mustn't fool ourselves" 'Orbanian' discourse in the political battle over the refugee crisis and European identity. *Journal of Language Aggression and Conflict*, vol. 5, iss. 2, pp. 251-273.
- [5] Busutil, R. O. and Marquez, Y. P. (2017). The migration crisis in the Mediterranean and the European Union: main politics and measures anti-immigrants. *Novedades en Poblacion*, vol. 13, iss. 26, pp. 1-9.
- [6] Buturoiu, R., Stefanita, O. and Corbu, N. (2017). The Refugee Crisis from the Media to the Public Agenda. In *Quality of Democracy in the New Political Area*. Bologna: Filodiritto, pp. 20-29.

- [7] Campesi, G. (2015). Neoliberal and Neoconservative Discourses on Crime and Punishment. *Sortuz: Oňati Journal of Emergent Socio-Legal Studies*, vol. 3, iss. 1, pp. 33-52.
- [8] Divinský, B. (2007). *Zahraničná migrácia v Slovenskej republike: Vývojové trendy od roku 2000 (Foreign migration in the Slovak Republic: development trends since 2000)*. Bratislava: SFPA Research Center.
- [9] EMN (2011). *Migračná politika Slovenskej republiky s výhľadom do roku 2020 (Migration policy of the Slovak Republic until 2020)*. Resolution of the Slovak Government No 574 of 31. August 2011 [online]. [cit.2018-02-23]. Available at: [https://www.emn.sk/phocadownload/documents/migracna\\_politika\\_sr\\_2020\\_sk.pdf](https://www.emn.sk/phocadownload/documents/migracna_politika_sr_2020_sk.pdf).
- [10] Euractiv.sk (2017). *Slovensko je v akceptácii migrantov na chvoste svetového rebríčka (Slovakia comes last in the acceptance of migrants)* [online]. [cit.2018-02-23]. Available at: <https://euractiv.sk/section/spravodlivost-a-vnutro/news/slovensko-je-v-akceptacii-migrantov-na-chvoste-svetoveho-rebricka/>.
- [11] Fichnová, K., Wojciechowski, Ł. P. and Mikuláš, P. (2018). Trust and Marketing. In *Intuition, Trust, and Analytics*. Boca Raton: CRC Press Taylor & Francis Group, pp. 143-172.
- [12] Gažiová I. and Rapošová, T. (2016). *Protipól k strachu: občianske aktivity na pomoc utečencom (Opposite of fear: civic activities to help the refugees)* [online]. [cit.2018-02-23]. Available at: <http://cvek.sk/wp-content/uploads/2016/01/Protipol-k-strachu-1.pdf>.
- [13] Geiger, M. and Pécou, A. (2010). *The politics of international migration management*. Hampshire: Palgrave. Macmillan.
- [14] Habovštiaková, K. and Krošláková, E. (1996). *Človek a príroda vo frazeológii (Man and Nature in Phraseology)*. Bratislava: Veda.
- [15] Hlinčíková, M., Chudžíková, E., Gallová Kriglerová, E. and Sekulová, M. (2016). *Migranti v meste: prítomní a (ne)viditeľní (Migrants in the city: present and (in)visible.)*. Bratislava: Institute for Public Affairs Center for the Research of Ethnicity and Culture.
- [16] Hlinčíková, M. and Mesežnikov, G. (eds.) (2016). *Otvorená krajina alebo nedobytná pevnosť? Slovensko, migranti a utečenci. (An open country or impenetrable stronghold? Slovakia, migrants and refugees.)* Bratislava: Institute for Public Affairs & Heinrich-Böll-Stiftung.
- [17] Kohoutek, J. (2013). Bezpečnostní aspekty mezinárodní migrace do České republiky (Security Aspects of International Migration to the Czech Republic). In *Sborník z II. mezinárodní vědecké konference studentů doktorských studijních programů v oblasti společenských věd*. Praha: Nakladatelství Epoque, pp. 106-128.
- [18] Nenička, L. (2016). The Migration and the Search for European Identity. In *ICEI 2016. Proceedings of the 3<sup>rd</sup> International Conference on European Integration*. Ostrava: VŠB, pp. 656-663.
- [19] Nová, M. (2016). Migration – Models and Principles of Immigrant Integration. In *ICEI 2016. Proceedings of the 3<sup>rd</sup> International Conference on European Integration*. Ostrava: VŠB, pp. 673-678.

- [20] Onderčanin, L. (2017). *Európsky súd zamietol žalobu o utečeneckých kvótach, Fico rozhodnutie rešpektuje (European Court dismissed the action on refugee quotas, Fico takes note of the decision)* [online]. [cit.2018-02-23]. Available at: <https://svet.sme.sk/c/20642518/europsky-sud-zamietol-slovensku-zalobu-o-uteceneckych-kvotach.html>.
- [21] Remanda, L. C. (2017). Understand the European Identity through the institutional embeddedness theory: The case of the crisis of migrants / refugees. *Politické vedy*, vol. 20, iss. 4, pp. 153-173.
- [22] Ripka, I. and Imrichová, M. (2003). *Základy slovenskej lexikológie (Foundations of Slovak lexicology)*. Prešov: Prešovská univerzita v Prešove.
- [23] SITA (2017). *Danko naznačil možnosť zavedenia povinnej vojenskej služby (Danko indicated the possibility of introducing compulsory military service)* [online]. [cit. 2018-02-23]. Available at: <https://domov.sme.sk/c/20555345/danko-naznacil-moznost-zavedenia-povinnej-vojenskej-sluzby.html>.
- [24] Spálová, L. (2015). Persuazívne možnosti komunikačných modelov v politickom brandingu (Persuasive options in communication models in the political branding.). In *Medzinárodné vzťahy 2015. Aktuálne otázky svetovej ekonomiky a politiky: zborník príspevkov zo 16. medzinárodnej vedeckej konferencie, Smolenice 3. – 4. december 2015*. Bratislava: Ekonóm, pp. 640-648.
- [25] Spálová, L. and Szabo, P. (2017). Možnosti sémantických prístupov v analýze konceptu personalizácie politického lídra (Options in the semantic approaches to the analysis of personalisation of a political leader.) In *Jazyk a politika. Na pomedzí lingvistiky a politológie III*. Bratislava: Ekonóm, pp. 529-538.
- [26] Stevens, D. (2017). Asylum, Refugee Protection and the European Response to Syrian Migration. *Journal of Human Rights Practice*, vol. 9, iss. 2, pp. 184-189.
- [27] Štrbová, E. (2016). Consumer involvement and motivation in attending socially oriented marketing events. *European Journal of Science and Theology*, vol. 12, iss. 2, pp. 191-202.
- [28] TASR, Pravda.sk (2018). *Kiska je naj dôveryhodnejším politikom, nasledujú Fico a Danko (Kiska is the most credible politician, followed by Fico and Danko)* [online]. [cit.2018-02-23]. Available at: <https://spravy.pravda.sk/domace/clanok/457377-prezident-kiska-je-najdoveveryhodnejším-slovenským-politikom-ukazal-prieskum/>.
- [29] Urbánek, T. (2003). *Psychosémantika. Psychosémantický prístup ve výzkumu a psychodiagnostice*. Brno: Psychodiagnostický ústav AV ČR a Nakladatelství Pavel Křepela.
- [30] Vašečka, M. (2009). *Postoje verejnosti k cudzincom a zahraničnej migrácii v Slovenskej republike (Attitudes to foreigners and foreign migration in the Slovak Republic)*. Bratislava: IOM.
- [31] Žuborová, V. and Borárosová, I. (2016). Migrácia v médiách: utečenci verzus migranti. Chápanie migrantov a utečencov v mediálnom priestore v kontexte pozitívnej a negatívnej mediatizácie (Understanding of the migrants and refugees in the media in the context of positive and negative media coverage. Migration in the media: refugees versus migrants). *Central European Journal of Politics*, vol. 2, iss. 1, pp. 1-15.

## China's New Normal: The Case for Trade and Competitiveness. Why Openness Still Matters?

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### **Abstract**

*Openness to trade, investment and even the movement of people is vital for prosperity, peace and individual freedom. And there have been few better moments in history to reconfirm the role of trade as central to global growth, job creation and development. Today's economic circumstances are full of challenges. China has come a long way since the 1978 election of President Deng Xiaoping heralded a new era of market-oriented reforms. From 1980 to 2010, its economy grew 18-fold, averaging 10 percent a year. It progressed from low-income to upper-middle income country status, lifting hundreds of millions out of poverty: by 2011 just 6 percent of people were in extreme poverty, compared with 61 percent in 1990. Recent developments – including the weakening of the yuan, the stock market crash, rapid credit growth, and a stalling property market – have cast some doubt on China's economic prospects. Yet a hard landing of the Chinese economy still seems unlikely. China has the opportunity to be a global leader in a number of important areas that will be cornerstones of global growth in the next decades and this is also challenge as well as threat for the United States, Japan and especially the European Union Member States.*

**Keywords:** China, Competitiveness, European Union, GCI, Globalisation, Openness, Trade

**JEL Classification:** E60, F02, F62, O11, O47

### **1. Introduction**

Openness to trade, investment and even the movement of people is vital for prosperity, peace and individual freedom. And there have been few better moments in history to reconfirm the role of trade as central to global growth, job creation and development. Today's economic circumstances are full of challenges. Global growth remains fragile after the 2008-2009 crisis, with few bright spots in the global economy. Potential output growth has declined in recent years across developed and developing economies owing to structural factors that led to lower productivity growth (IMF, 2015). Trade growth is weaker than at any time in the past two decades. In some quarters there is a sense that the financial crisis presents a case to roll back much of the deep integration that began after the Second World War and took hold rapidly since the 1980s. Global opinion shows views on openness are uneven. A September 2014 Pew poll indicated that while there is strong support for trade in developing countries, the picture is more mixed in advanced economies, particularly in perceptions of employment and wage effects (Pew Research Center, 2014). Yet it is these advanced economies that have historically been the drivers of a more globally integrated world, leading eventually to a multipolar world with changing global political-economic relations.



At the same time, there are signs of new energy in global integration. Negotiations have intensified in several major groupings, including the Trans Pacific Partnership, the Transatlantic Trade and Investment Partnership between the European Union and the United States, the Regional Comprehensive Economic Partnership (RCEP) in Asia, the Pacific Alliance in Latin America and the Tripartite Free Trade Agreement in Africa. Since the December 2013 Bali Ministerial Conference, the World Trade Organization (WTO) has a new agreement on trade facilitation. When viewed within a longer perspective, this energy is not surprising, forming part of a long trend towards more closely interlinked global markets. With the move to a more multipolar global economy, more players have joined the game. Since 1970, the share of developing countries in global trade flows has more than doubled, now making up close to 40% of world trade. An almost fourfold increase has brought them to half of the share in global foreign direct investment flows; and their share in global GDP has doubled from 15 % to 30 % (WEF, 2015, p. 4).

These developments have also intensified competition in global markets, which, in turn, implies a greater need to be competitive to generate additional market opportunities and economic links in the presence of many more participants vying for the same space. China has the opportunity to be a global leader in a number of important areas that will be cornerstones of global growth in the next decades and this is also challenge as well as threat for the United States, Japan and especially the European Union Member States (Fojtíková, 2013). These facts involves several questions to be solved: Against this backdrop, what can openness to trade and investment contribute to a sustained global recovery? How can the potential gains through global value chains be harnessed? How do countries increase their competitiveness to take better advantage of the global economy?

## **2. Relations of International Trade and Competitiveness**

Since the global financial crisis, policy-makers have focused mainly on macroeconomic policies, emphasizing fiscal and monetary stimulus as well as financial reregulation. This is not the place to argue the pros and cons of such policies. However, such a focus has come at the expense of attention to structural reforms to address sluggish productivity within economies. Microeconomic constraints to growth – distortions in product and factor markets, education, skills, and infrastructure – have not been sufficiently addressed. This is where the competitiveness agenda kicks in. Trade and competitiveness are intimately connected. Competitiveness can be defined as the set of factors – policies, institutions, strategies and processes – that determine the level of sustainable productivity of an economy, be it the world, a continent (or macro region), nation, region or even a city (WEF, 2014). Competitiveness centres on productivity – the efficiency with which an economy uses available inputs to produce outputs. It determines the rate of return on investments, which fundamentally drives economic growth. Openness to the world – through trade, investment and the movement of people – is crucial to competitiveness. But openness on its own has its limits. To reap its benefits fully, it must be combined with productivity-enhancing reforms at home. This is the rationale for pursuing reforms to advance a twin focus on trade and competitiveness.

The historical record is clear: no country has developed successfully in modern times without harnessing economic openness for its national development. Of course, the paths taken by individual countries have varied greatly. Of the 13 countries with sustained growth trajectories surveyed in the landmark 2009 Growth Commission report, each took different pathways and had different mixes of economic activities (Commission on Growth Report, 2009). However, the common thread between the countries that have grown successfully is that they have exploited the potential offered by openness to create new economic opportunities for their people. They have also harnessed global economic forces to drive greater efficiency,

innovation and productivity in their own economies. In other words, they have not only looked within for the elements needed to bring long-term prosperity but also have looked outside their borders and made the most of what economic integration can offer (WEF, 2015).

Although openness comes with risks and costs, experience shows that when managed effectively these are short-term and far outweighed by the long-term gains. The benefits of trade and investment integration can be thought of in two ways, both of which are well known. First, they help create new economic opportunities by increasing the size of the market available to domestic firms as well as driving potential value chains with which they could link up their own production. Second, they drive productivity and innovation by exposing firms to international competition, expertise and technology. Through these two channels, trade makes a significant contribution to poverty reduction, helping to unleash the potential of the private sector to create jobs. It is wages earned through jobs that provide the key means for improving welfare: countries such as China and Vietnam, following in the footsteps of previous generations of East Asian Tigers, have been able to lift hundreds of millions out of poverty through steady growth in the wages earned by workers in fast-growing economies (World Bank Group and World Trade Organization, 2015). And in advanced economies, employment and wage levels have become a key test of the effectiveness of economic growth in delivering widespread benefits.

Along with its economic benefits, openness to the global economy brings geopolitical benefits. Although the world is going through a turbulent phase geopolitically – from the Middle East, to Ukraine, to maritime East Asia – there is no doubt that the close ties brought about through ever deeper economic integration have contributed greatly to overall peace and stability since the Second World War. At the regional level, growing understanding of how integration among neighbours can deliver long-term economic gains has led to increasingly close cooperation. In East Asia, for example, although tensions occasionally surface, economic dependence through regional production networks, uniting the ASEAN countries with northeast Asia (China, Hong Kong, Japan, Taiwan and the Republic of Korea) makes all out conflict today highly costly and much less likely (Baldwin 2011, 2014; Kovářová, 2016).

### **3. Why Openness Still Matters? Beyond Openness – the Need for Competitiveness**

Openness is an indispensable enabler of growth, job creation and development. But openness alone does not lead to success. The competitiveness of economies in an integrated world determines how well they convert the potential created by access to global markets into opportunities for their firms, farms and people. What does this entail? First up are policies and regulations that affect the business climate. Stable macroeconomic conditions are critical, as are well-functioning markets for the key inputs in any economy – land, capital and labour. The level of competition in the domestic economy is an important determinant of how well its firms will compete with the rest of the world. Innovation capacities can give a competitive edge to firms; as can the capacity to bring small and medium sized enterprises (SMEs) from their formative stages to businesses with the ability to compete in a global market.

“Institutions” are as important as “policies”. These include efficient public administration, timely decision-making and the rule of law – all aspects of “good governance”. Also important is “hard” infrastructure – transport (airports, ports, roads and railways), communications, energy and logistics, along with “soft” infrastructure, including education and skills. Finally, an understanding of how policies and institutions interact to affect competitiveness, both at the level of the economy overall and at the level of particular industries, is important.

Competitiveness is often presented as a relative concept (i.e. an economy is more competitive than another one), which leads many to see competitiveness policy as a zero-sum game. In reality, improving competitiveness simply means to create conditions that allow an economy to allocate scarce resources where opportunities arise as external and internal conditions change. At the global and continental (or macro-regional) level, uncooperative national policies are a primary constraint to competitiveness. And as production increasingly transcends borders, the spill over effects of domestic policies multiply in number and size. Improving competitiveness is as much a collective effort as an individual one. Countries that want to boost the productivity of their economies need to cooperate to have functioning and up-to-date supranational institutions and frameworks.

Indeed, the content of most economic integration agreements today is a striking demonstration of the wide range of policies that shape a country's interaction with the global economy. "Trade agreements" stopped being only about tariffs and market access rules years ago. The mega-regional deals currently under negotiation will cover economic activities and areas of regulation that were once thought well beyond the purview of international negotiations. These include rules on investment, services, intellectual property, public procurement, state-owned enterprises, coherence of domestic regulations, competition policy transparency, SMEs, environmental regulation and labour standards (WEF, 2015).

It is striking that attention on these competitiveness policies is focused not only at the national and international level. With cities contributing 80 % of the world's GDP – despite housing just over a half of the world's population – a growing focus on the drivers of competitiveness at the city and subnational level is unsurprising. Attracting international trade, investment and mobile talent, as well as finding productive niches in Global Value Chains (GVCs), are now critical to city and sub-national competitiveness. The increasing spread of GVCs and skills present opportunities for countries to connect to high value-added parts of production processes without having to develop entire industries within their borders. GVCs have also brought into sharper focus the importance of trade facilitation, investment and "behind-the-border" policies for competitiveness. Engagement between governments at the city and sub-national level, the private sector and other stakeholders can reshape the environment in which business operates and significantly boost prosperity.

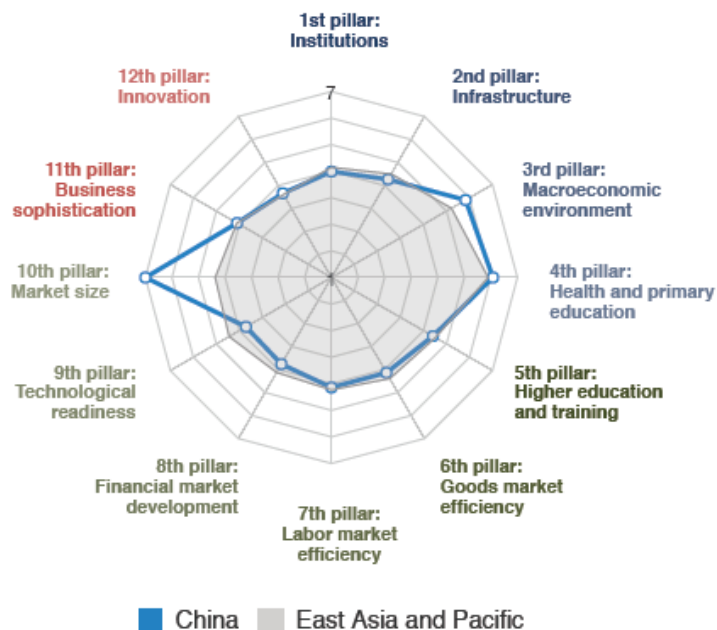
#### **4. China's New Normal**

Ten years ago, the global financial crisis interrupted a period of sustained economic growth dating back to the 1960s. Since then, despite unorthodox monetary policy and fiscal stimulus packages, advanced economies have experienced prolonged comparatively sluggish growth. In emerging markets, the impact of the global financial crisis was lessened in part by interest rate differentials, with advanced economies fuelling capital inflows in the form of foreign direct investment, the commodity super boom, and – related to this – the rapid growth of China. China has come a long way since the 1978 election of President Deng Xiaoping heralded a new era of market-oriented reforms. From 1980 to 2010, its economy grew 18-fold, averaging 10 percent a year. It progressed from low-income to upper-middle income country status, lifting hundreds of millions out of poverty: by 2011 just 6 percent of people were in extreme poverty, compared with 61 percent in 1990 (World Bank Group and World Trade Organization, 2015).

Recent developments – including the weakening of the yuan, the stock market crash, rapid credit growth, and a stalling property market – have cast some doubt on China's economic prospects. Yet a hard landing of the Chinese economy still seems unlikely, for three reasons. First, as the Global Competitiveness Index (GCI) shows, China possesses strong economic foundations. The country ranks 27th out of 137 economies in the 2017-2018 edition (WEF,

2017). China has achieved near universal primary education and high levels of public health, invested massively in transport and energy infrastructure, and ensured a relatively stable macroeconomic environment. These successes not only have contributed to China's emergence as a manufacturing hub, they also represent assets on which to build. China's advantages are not shared by many neighbouring economies at a similar stage of development, as shown by Figure 1.

**Figure 1: China in the 12 Pillars of the GCI (Score 1-7)**



Source: WEF, 2017, p. 90

China (27th) has gained one place as a result of steady, albeit incremental, improvements to its overall competitiveness score. Since last year, China has made progress in all pillars except its macroeconomic environment and infrastructure. A decline in the former is explained by a worsening of the government budget deficit, which has been slightly higher than the expected target for 2016. The score for the infrastructure pillar decreases for the second year in a row, the result in part of a decline in the quality of port infrastructure and the reliability of electricity supply as perceived by the business community. The largest gains are observed in technological readiness, owing to higher ICT penetration and the extent to which foreign direct investments have been bringing new technologies to China. Despite the remarkable progress already made, further improvement on this front would foster the growth of emerging digital industries and create the conditions necessary to kick-start new ones. Other significant advances have been made in the goods market efficiency pillar as a result of a slight reduction in the number of procedures for starting a business compared to last year.

Second, an eventual slowdown was inevitable, predictable, and entirely normal, given China's impressive growth trajectory over the past two decades. WEF also compares China's annual real growth rate since 1980 to the GDP-weighted average growth rate of other countries in the income group to which it belonged in each year. Since 1991, China has grown faster than its peers every year. For several years in the 1990s, the differential was almost 10 percentage

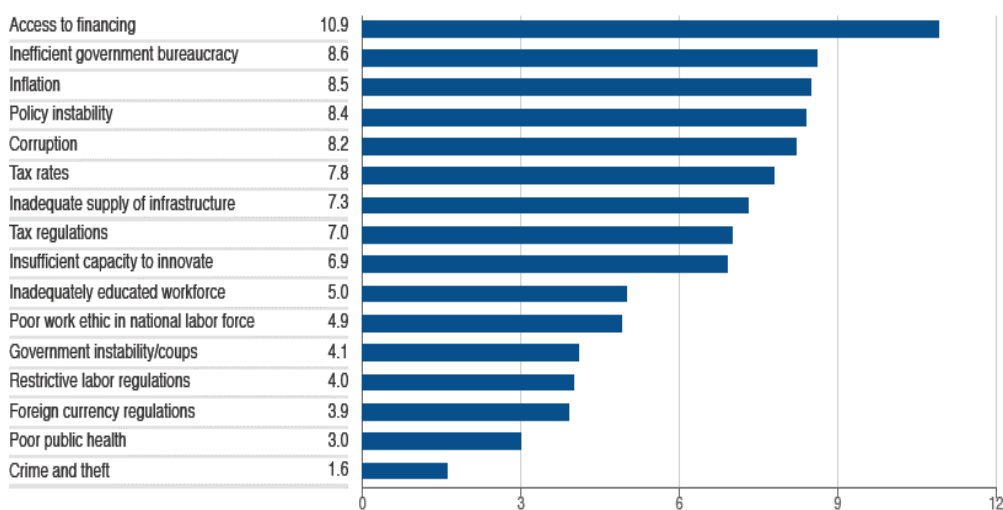
points. Since achieving upper-middle-income status in 2010, the differential has been around 5 percentage points.

Third, even though it has not yet abandoned the official 7 percent target, there are signs that the government has been preparing for the economy’s new phase and has been recalibrating its growth objectives from the quantitative to the qualitative. The 12th five-year plan, adopted in 2011 and covering 2010–15, had called for a rebalancing of the economy; more recently, President Xi referred to a “new normal” under which growth will be lower.

Even though the economy is unlikely to experience a hard landing, the challenges and downside risks are many. Under the new normal, productivity gains will be harder to achieve. This is reflected in China’s stagnation in the GCI rankings for the past four years. The drivers that fuelled China’s growth—investment, low wages, urbanization—are yielding diminishing returns or even vanishing, as shown by the downward trend of overall productivity since 2007. Future gains will have to come through more market-oriented reforms that tackle remaining distortions, controls, and rigidities across the economy and that enable more efficient use of factors of production.

The GCI points to the structural weaknesses of China’s financial sector: it ranks 78th for the soundness of its banks, which have accumulated many non-performing loans. The sector is dominated by large state-owned banks, and credit flows more to state-owned enterprises or large corporations with connections than to small- and medium-sized enterprises: access to finance is rated as the second most problematic factor for doing business in China (Figure 2). A rank of 46th on goods market efficiency highlights the need to create a level playing field in non-strategic economic sectors by reforming state-owned enterprises and subjecting them to fair domestic and foreign competition, and by tackling corruption and bureaucracy. Moving beyond market efficiency, the list of the most problematic factors for doing business in China is topped by its lack of capacity to innovate, which has become a growing concern in recent years (Figure 2). Evolving from a manufacturing-based economy to an innovation powerhouse for design and R&D requires a holistic approach to the innovation ecosystem, including nurturing talent (China ranks 47th in higher education and training) and technological readiness (ranking 73th; technology is still far from universally available, let alone used).

**Figure 2: The Most Problematic Factors for Doing Business in China**



Source: WEF, 2017, p. 90

The progress that China has already made in rebalancing its economy suggests its capacity to identify and rectify weaknesses in its growth model. Since 2005, the relative importance of manufacturing in China's economy has been declining steadily, and services now account for a bigger share of GDP. Meanwhile, a fledgling social safety net consisting of a healthcare and pension system, along with rising incomes and lower exports, have initiated a rebalancing of demand toward domestic consumption. China's "new normal" will bring further challenges in improving productivity, but its strong performance elsewhere in the GCI indicates that the country is well positioned to meet them.

## **5. Conclusion**

Trade and competitiveness are intimately connected. As demonstrated by the East Asian "miracle economies" (Hong Kong SAR, the Republic of Korea, Singapore, and Taiwan), trade and investment integration can improve competitiveness through two channels: first, by increasing the size of the market available to domestic firms; and second, by driving productivity and innovation by exposing firms to international competition, expertise, and technology. No country has developed successfully in modern times without opening its economy to international trade, investment, and the movement of people across borders. Conversely, it is the competitiveness of economies – the level of productivity of continents, nations, subnational regions, and even cities – that determines how well they translate openness to trade and investment into opportunities for their firms, farms, and people. Trade and competitiveness come together in GVCs. Trade no longer means merely goods crossing borders; rather it is the international, interconnected flow of goods, services, investment, people, and ideas along a value chain. Production stages that previously took place in a single factory, or in a single country, are now dispersed across many factories in many countries. GVCs are the key drivers of employment, productivity, and growth in international trade. They create niches for developing countries to industrialize faster and better, and they enable developed countries to specialize in higher-value production in goods and services, thus improving wages and consumer choice. Taking advantage of GVCs demands more than keeping borders open to trade and investment: a whole host of domestic non-tariff and regulatory barriers also need to be removed as well as a welcoming business climate provided. Unilateral measures can help countries take advantage of GVCs, but they work best when they are locked in by international agreements such as those negotiated by the World Trade Organization, bilateral investment treaties, and regional trade agreements (WEF, 2015).

Openness has non-economic benefits, too. Wider and deeper cross-border economic integration has contributed greatly to overall peace and stability since World War II. It has increased individuals' freedom to produce and consume in daily life, widening the life choices and chances of large numbers of ordinary people. However, openness and the links between trade and competitiveness have fallen off the agenda in recent years. Since the 2008-2009 crisis, policymakers have been in fire-fighting mode, focusing on fiscal and monetary macroeconomic stimulus and financial reregulation. This has arguably come at the expense of supply-side issues and structural reforms needed to address sluggish productivity growth. Supply-side constraints to growth – distortions in product and factor markets, education, skills, and infrastructure – have not been sufficiently addressed; if anything, market distortions have increased since the crisis, undermining competitiveness. And although protectionism has not surged, there is evidence of creeping protectionism, especially with increasing non-tariff barriers to trade. Global trade growth is weaker than at any time in the last two decades. Strengthening both global openness and domestic competitiveness has never been more important. To revive sluggish productivity and tap new sources of growth, innovation, job creation, and development, a trade-and-competitiveness agenda should be a priority for policymakers around the world.

### Acknowledgements

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### References

- [1] Baldwin, R. (2011). 21st Century Regionalism: Filling the gap between 21st century trade and 20th century trade rules. *CEPR Policy Insight No. 56*. [online]. [cit. 2018-03-28]. Available at: [http://www.cepr.org/pubs/PolicyInsights/CEPR\\_Policy\\_Insight\\_056.asp](http://www.cepr.org/pubs/PolicyInsights/CEPR_Policy_Insight_056.asp)
- [2] Baldwin, R. (2014). Multilateralising 21st century regionalism. *OCED background paper*. [online]. [cit. 2018-03-28]. Available at: <http://www.oecd.org/tad/tradedev/Multilateralising%2021st%20century%20regionalism.pdf>
- [3] Commission on Growth and Development (2009). *The Growth Report: Strategies for Sustained Growth and Inclusive Development*. [online]. [cit. 2018-03-28]. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/6507/449860PUB0B0x3101OFFICIAL0USE0ONLY1.pdf?sequence=1>
- [4] Fojtíková, L. (2013). Quantitative Evaluation of the EU's Export Potential to Russia Using the Gravity Model. In *Mathematical Methods in Economics 2013. Jihlava: 31st International Conference on Mathematical Methods in Economics*. Jihlava: Polytechnical University Jihlava, pp. 171–176.
- [5] IMF. (2015). *Where Are We Headed? Perspectives on Potential Output*. World Economic Outlook, Chapter 3. April 2015.
- [6] Kovářová, E. (2016). Impact of Foreign Private Investment on the Fulfilment of the Sustainable Development Goals in Developing Countries. In *Proceedings of the 1<sup>st</sup> International Conference Contemporary Issues in Theory and Practice of Management*. Czestochowa: Czestochowa University of Technology, pp. 216-222.
- [7] Pew Research Center (2014). *Faith and Skepticism about Trade, Foreign Investment*. [online]. [cit. 2018-03-28]. Available at: <http://www.pewglobal.org/2014/09/16/faith-and-skepticismabout-trade-foreign-investment/>
- [8] World Economic Forum (2014). *The Competitiveness of Cities*. [online]. [cit. 2018-03-29]. Available at: [http://www3.weforum.org/docs/GAC/2014/WEF\\_GAC\\_CompetitivenessOfCities\\_Report\\_2014.pdf](http://www3.weforum.org/docs/GAC/2014/WEF_GAC_CompetitivenessOfCities_Report_2014.pdf)
- [9] WEF. (2015). *The Case for Trade and Competitiveness*. Geneva: WEF.
- [10] WEF. (2017). *The Global Competitiveness Report 2017-2018*. Geneva: WEF.
- [11] World Bank Group and World Trade Organization. (2015). *The Role of Trade in Ending Poverty*. [online]. [cit. 2018-03-29]. Available at: <http://www.worldbank.org/en/topic/trade/publication/the-role-of-tradein-ending-poverty>

## **Social Inequalities within the European Union: How to Efficiently Measure the Implementation of the Europe 2020 Strategy Goals?**

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### **Abstract**

*Economic crisis hit all the European Union Member States hard, the impact of crisis varied considerably. The low growth performance in the EU has increased concerns regarding an increasing wage dispersion, income inequality at large, and social exclusion in line with poverty. Inequality should be seen as a cornerstone of both sustainable and inclusive growth under the Europe 2020 Strategy. Social inequality in the EU is a very real problem that hampers sustainable economic growth. The purpose of this paper is to introduce evaluation of social development convergence and divergence trend between EU28 Member States in the context of the Europe 2020 Strategy and to review the relevant approaches to evaluation of territorial development (especially the EU case) based on composite indices. The paper gives an outline of the issues of labour market and income disparities and poverty. Policy-makers must be clear about what social objectives they are aiming to achieve, therefore special attention is paid to headline national goals of the Europe 2020 Strategy. Measurement of territorial progress with regards to achieving the developmental potential plays a crucial role in improving the prosperity and quality of life in any territories.*

**Keywords:** Composite Index, Economic Crisis, EU28, Europe 2020 Strategy, Social Inequality

**JEL Classification:** B41, E24, E61, O52, P51

### **1. Introduction**

Improving the standard of living and quality of life for societies has undoubtedly become one of the most important objectives across the globe. The achievement of this developmental objective is complex and difficult issue. Preceding views on the attainment of higher output as a means to its achievement have faded away on the basis of higher global inequalities and incidences of poverty, notwithstanding the presence of strong economic performances. Greater emphasis has thus been directed towards the collective improvement of social, cultural and economic aspects of areas, resp. multidimensional aspects and endowment of territories. Economic development in this regard has been viewed as an important process which asserts an enhancement of both qualitative and quantitative features in territories contributing to higher levels of prosperity (Meyer et al., 2016). However, as a multidimensional process, the measurement of the progress which societies have made in their developmental efforts, has proven to be difficult but also very popular.

The European Union (EU) faces many challenges. On the global stage, the EU has to speak with one voice to counter a plethora of political, military and economic crises. Internally, it needs to foster cohesion in spite of the many events that threaten the EU at its core. In this context, do social issues matter at all? If we look at the EU evolution over the past decades,



substantial progress has been made in terms of building an internal market and an economic and monetary union, albeit not without problems, as the 2008 crisis has shown. It looks actually, as if the EU and its Member States were mostly thinking in economic terms, hoping that economic solutions will fix all social problems at once. To negate the importance of social issues is to undermine the EU foundations (Allmendinger and Driesch, 2014). Many politicians and economists believe that economic growth replaces or diminishes the need for social policies. However, the EU growth over the last decades has been accompanied by increase in inequalities in many countries. Inequalities threaten social cohesion and they threaten growth.

If such concerns are correct, it is essential not only to build institutional structures for European social union but also to map social inequalities in the EU. The low growth performance in the EU over the recent decades has increased concerns regarding an increasing economic dispersion, income inequality at large, and social exclusion. Recent research works has stimulated fierce debate on inequality among academics and policy makers. The recent economic crisis revealed many of the weaknesses of the current European economic policy, not least at the level of its fiscal policy, monetary policy, industrial policy, and social policy, and its inability to address problems related to inequality. Inequalities in the EU have been the object of extensive research over the last decade. Several factors can explain this widespread interest; especially the revival of growth theory was contemporaneous with a growing empirical literature on economic convergence (Sala-i-Martin, 2006).

The level of social inequalities belongs to important indicators influencing the socio-economic development and other processes taking place in the social and economic realm. Facilitating rational income distribution and reducing poverty are mentioned among the main goals of public policy. It should be mentioned that such multidimensional phenomena as income disparity and poverty might be analysed from many different perspectives, including the national and international, also within the EU. Striving for fairness in economic development is crucial in order for societies to be stable and citizens not to feel disenchanting. The economic crisis has put inequalities high on the political agenda, and made this an issue of serious public concern. There is an increasing recognition that social policy can reduce inequality and poverty while simultaneously improving the economic functioning of the country as reflected in the idea of inclusive growth in the EU's Europe 2020 strategy, with references to a high-employment economy delivering economic, social, and territorial cohesion in which benefits of growth and jobs are widely shared. In view of the current debate and the literature review, the objectives of this study focus on the following key issue, i.e. to describe the recent evolution of inequalities and dispersion across the EU Member States using different definitions of social inequality measures in relation to the Europe 2020 Strategy, i.e. the main research question is how to efficiently measure the success implementation of the Europe 2020 Strategy goals?

## **2. Relations of Competitiveness and Inequalities**

The multidimensional nature of quality and inequality issues and the disparate social policy priorities of nations and other regions in addressing these calls for a reconciliatory performance evaluation framework. The competitiveness and welfare level of the people of any country is clearly related to the performance of its potential economic growth. A keen interest in economic growth or productivity growth is the objective of economic policies. The competitiveness and welfare level of people of any country is clearly related to the performance of its potential economic growth. The keen interest in economic growth or productivity growth is the objectives of economic policies. Therefore, the economic performance of countries and the world as a whole has formed the subject matter of numerous studies over the last decades. Academics and policy makers are concerned with the evolution

of inequality and its negative effect on development, see Rajan (2010), Stiglitz (2009) or Krugman (2008). This is also the case of the EU. Nevertheless, the differences between the EU Member States are enormous. Small, rich countries, such as Luxembourg, contrast sharply with big, poor ones, such as Romania. Despite this, many indicators are published which refer to the EU as a whole, including measures of socio-economic inequalities and with the time. The recent economic crisis revealed many of the weaknesses of the current European economic policy, not least at the level of its fiscal policy, monetary policy, industrial policy, and social policy, and its inability to address problems related to inequality. The current Europe 2020 Strategy aims achieving an inclusive economic growth, benefitting the largest possible number of people, while other international institutions are also fully concerned with inequality issues. The European Council approved the Europe 2020 strategy, an economic growth and well-being improvement plan for the EU in the ensuing decade. The strategy includes five interrelated headline targets to be achieved by the year 2020, encompassing employment, innovation, education, poverty and social inclusion, and climate/energy. Inequality should be seen as a cornerstone of sustainable and inclusive growth.

For the EU, the deepening social inequalities represent a very real threat to the well-being of many EU citizens, with so many being left behind as the overall European prosperity increases. Nevertheless, the differences between the EU Member States are enormous, as mentioned above. Small rich countries, such as Luxembourg, contrast sharply with big poor ones, such as Romania. Despite this, many indicators are published which refer to the EU as a whole, including the measures of socio-economic inequalities in time. The recent economic crisis revealed many of the weaknesses of the current European economic policy, not least at the level of its fiscal policy, monetary policy, industrial policy and social policy, and its inability to address problems related to inequality. Inequality is a key problem which the EU is facing, and it has significant impacts not only on human well-being, but also on economic performance. In order to address this problem properly, there is a need for substantial changes in economic theory, and in the empirical measurement of inequality. The effectiveness of the European convergence policy can also be improved by a clever choice of country-specific social activities and significant economic growth. Inequality can have many dimensions. Economists are concerned specifically with the economic or monetarily measurable dimension related to individual or household income and consumption. However, this is just one perspective, as inequality can also be linked to inequality in skills, education, opportunities, happiness, health, life expectancy, welfare, assets and social mobility. Inequality can be defined and measured as a specific resource distributed across the whole society; while economic inequality means primarily differences in earnings and incomes, social inequality relates to differences in access to social commodities including education and healthcare, but also social and institutional networks. While the EU has a clear role and competences in reducing inequality, reducing inequality at the national level within the EU countries is still a precondition for reducing inequality at the multinational level of the EU as a whole.

In this context, Staničková (2017) also raised the question about influencing the aspects of social quality and inequality – do social issues matter at all? If we look at the EU evolution over the past decades, substantial progress has been made in terms of building an internal market and an economic and monetary union, albeit not without problems, as the 2008 crisis has shown. In fact, it looks as if the EU and its Member States were mostly thinking in economic terms, hoping that economic solutions will fix all social problems at once. To negate the importance of social issues is to undermine the EU foundations (Allmendinger and Driesch, 2014). Many politicians and economists believe that economic growth replaces or diminishes the need for social policies. However, the EU growth over the last decades has been

accompanied by an increase in inequalities in many countries. Inequalities threaten social cohesion and growth.

Inequality is a key problem facing the EU, and it has significant impacts not only on human well-being, but also on economic performance. In order to address this problem properly, there is the need for substantial changes in economic theory, and in the empirical measurement of inequality. The effectiveness of European convergence policy can also be improved by clever choice of the country-specific social activities and significant economic growth. Inequality can have many dimensions. Economists are concerned specifically with the economics or monetarily measurable dimension related to individual or household income and consumption. However, this is just one perspective and inequality can be linked to inequality in skills, education, opportunities, happiness, health, life expectancy, welfare, assets and social mobility. The inequality can be defined and measured as specific resource is distributed across the whole society, while economic inequality means primarily differences in earnings and incomes, social inequality relates to differences in access to social commodities including education and health care, but also social and institutional networks. While the EU has a clear role, and competences, in reducing inequality, still reducing inequality at national level within EU countries is a precondition for reducing European inequality.

### **3. Measurement of Inequalities**

The term disparity is a very frequent term in the last decades. It comes from the Latin word *disparitas*, which means divided. There exist a lot of definitions of the terms disparity and regional disparity in theoretical literature but also in encyclopaedias and explanatory dictionaries. In encyclopaedias we can mostly find nearly the same general characteristics of this term, while in technical literature disparity is usually of a territorial dimension or is objectively applied according to the needs of the given branch, i.e. in the case of this chapter – understanding disparities in the field of social quality, or better to say inequality. According to the dictionary, disparity is an inequality or difference. Usually it concerns inequality or difference as a result of a society development tendency and it is exactly the high level of their variability that results in development inequality. Thus, the social subjects and their parts, or the phenomena and processes running within them, are unequally developed and this results in their inequality or difference, i.e. among these subjects or their parts disparities are developing. To take disparities as a manifestation of complicated social subjects demands leaving single approaches and seeing the problems of disparities as a complicated problem demanding that the multidimensional approach is accepted in its research. Such an approach means, above all, a holistic (system) view on the research subject. That is why it is needed to expand the research to other dimensions as well (Melecký and Poledníková, 2012).

The recent interest in inequality is thus simply the recognition of the centrality of the topic to economic theory, policy, and performance. The recent return of the topic of inequality has been triggered by important contributions to the empirical analysis of inequality (Galbraith 2009), but these empirical analyses must be combined with an economic theory that is adequate to address the macroeconomic and microeconomic effects of inequality on social welfare. These problems are not always well diagnosed because the empirical measurement of inequality is often unable to take into account the geographical dimension of inequality, which is particularly complex in Europe. As Galbraith (2009) notes, if we take into account inequality in Europe as a whole, rather than focusing on inequalities within specific countries, we find that inequality in Europe is a much more serious problem than usually believed. To study inequality in Europe as a whole, one needs adequate statistical tools which can be used in the geographical and political context faced by Europe. Economic analysis is in need not only of an economic theory that focuses on the macroeconomic and microeconomic impact of

inequality, but also of economic measurement that takes into account the several dimensions of inequality across the EU, including the geographical dimension (Martins et al., 2015).

If such concerns are correct, it is essential not only to build institutional structures for the European social union but also to map social inequalities in the EU. The low growth performance in the EU over the recent decades has increased concerns regarding an increasing economic dispersion, income inequality at large, and social exclusion. Recent research works have stimulated fierce debate on inequality among academics and policy makers. The recent economic crisis has revealed many of the weaknesses of the current European economic policy, not least at the level of its fiscal policy, monetary policy, industrial policy and social policy, and its inability to address problems related to inequality. Inequalities in the EU have been the object of extensive research over the last decade. Regional inequalities or disparities – economic, social and territorial – among countries and especially regions is an important topic in the frame of the enlarged European Union. Not only the EU enlargement by the Central and Eastern European Countries, but also the economic crisis hit all the EU Member States hard, though the impact of the crisis varied considerably. The low growth performance in the EU has increased concerns regarding an increasing wage dispersion, income inequality at large, and social exclusion in line with poverty. Inequality should be seen as a cornerstone of both sustainable and inclusive growth. Social inequality in the EU is a very real problem which hampers sustainable economic growth. In the EU, the evaluation of the social development convergence and divergence trend among selected countries or regions is linked with the context of the cohesion concept, or social cohesion. The concept of cohesion can be distinguished in several dimensions – economic, social and territorial. It also corresponds to the dimensions of disparities. We can identify several approaches and methods of the measurement and evaluation of disparities among states and regions at the European level.

The level of social inequalities ranks among important indicators influencing the socio-economic development and other processes taking place in the social and economic realm. Facilitating rational income distribution and reducing poverty is mentioned as one of the main goals of the public policy. It should be mentioned that such multidimensional phenomena such as income disparity and poverty might be analysed from many different perspectives, including national and international, also within the EU. Striving for fairness in economic development is crucial in order for societies to be stable and citizens not to feel disenfranchised. The economic crisis has put inequalities high on the political agenda, and made this an issue of serious public concern. There is an increasing recognition that social policy can reduce inequality and poverty while simultaneously improving the economic functioning of the country with references to a high-employment economy delivering economic, social, and territorial cohesion in which the benefits of growth and jobs are shared, as mentioned e.g. Šotkovský (2016).

Multidimensionality and the holistic character of searching for regional differentiation problems concern namely the identification of their factors and determinants and diagnosing their content and scope, as also stated by Fojtíková et al. (2014, 2017). The above-mentioned system based on the form of multidimensionality or multidisciplinary results in the necessity to use plural research methodologies by using different research methods and techniques. There are two basic reasons why we want to identify the relevant characters of subjects as the bearers of given properties, to compare them and to examine them as the subject of our knowledge, our activity or our interest, as stated by Kutscherauer et al. (2010). The first reason is the need to identify and to examine the differences in the subjects' relevant characters; generally it is finding what the different subjects are, within a defined (given) set of states, countries, regions, municipalities, enterprises, etc., and what the impact is on their changes, namely the system changes in structure and behaviour. Generally this is such a dominant approach that finding the negative characters is often said to be a disparity approach. The

second, less frequent reason up to now is examining the difference of the subjects (their relevant characters), leading to understanding their uniqueness and capability to differ specifically and efficiently from the other subjects under examination and also e.g. to put their comparative advantages to efficient use. This means that capability plays a certain positive role. However, this must be measured in some way and some manner. The present regional practice assesses regional disparities or uses methods based on interregional comparison, under which selected regions are compared based on experience and knowledge, or based on statistical methods, the practical use of which, at the level of different institutions dealing with the problem of territorial differences, is nevertheless very limited. The identification and measurement of regional disparities is the basic condition for taking space-oriented economic-political measures with which it would be possible to minimise these disparities or to eliminate them (Wishlade and Yuill, 1997). Discussion relating to regional disparities is usually concentrated on the following questions (Wishlade and Yuill, 1997, p. 4):

- what type of disparity it concerns,
- what indicator can be used for identified disparity measuring,
- what factors determine this disparity,
- wider relationships of disparities in the national or international context?

Based on answering the above-mentioned question Wishlade and Yuill (1997) structured disparities into three dimensions including social ones, i.e. disparity decomposition in the social sphere. The quality of life in regions is affected by many factors conditioned on one another, as also Sucháček (2013) discussed. It is very complicated to separate economic and social factors not only in theory but also in practice. Each event usually includes both dimensions and it depends on the point of view which of them will be predominant for the given purpose. The social sphere co-generates conditions for guaranteed incomes that are reflected in the population's standard of living and affect the total social climate of the society.

There is ongoing and increasing interest in measuring and understanding the level, causes and development of inequality. European inequality, however, has been explicitly covered less often and only by Brandolini (2007) and Franzini (2009). Disparity measurement and evaluation at any level of territorial development is associated with a lack of integrated approaches and methodology in most cases. A relatively independent and in recent years frequently used approach to the measurement and evaluation of disparities in socioeconomic development is the construction of comprehensive integrated indicators and composite indices (CI) that represent a useful tool in policy analysis and public communication. Composite indicators or indices (CIs) which compare territorial (e.g. country, region, city or local municipality) performance are increasingly recognised as a useful tool in policy analysis and public communication and very common for benchmarking the mutual and relative progress of territories in a variety of policy domains. CIs as a tool for a ranking become more and more popular, because they illustrate a comprehensive view on a phenomenon that cannot be captured by only one single indicator. CIs provide simple comparisons of territories that can be used to illustrate complex and elusive issues in wide-ranging fields, e.g., environment, economy, society or technological development, etc. It often seems easier for the general public to interpret CIs than to identify common trends across many separate indicators, and they have also proven useful in benchmarking territorial performance. This reflects growing recognition of the important role that CIs can play as a tool for evaluating trends in level of economic, social and environmental development and for assessing the impact of policy on well-being. However, CIs can send misleading policy messages if they are poorly constructed or misinterpreted. In fact, CIs must be seen as a means of initiating discussion and stimulating public interest.

CI are very common in field of economics and are used in a variety of policy domains such as national or regional competitiveness, sustainable development, quality of life assessment, globalisation and innovation (see Huggins, 2003; Saisana and Tarantola, 2002). The proliferation of these indicators is a clear symptom of their political importance and operational relevance in decision-making processes (Table 2 supplies a sample of various types of composite indicators in the EU case). Also other non-EU institutions and authors have constructed CIs for measuring the level of development in demography, education, agriculture, infrastructure and social services and overall socio-economic development of different territories. A general objective of most of the CIs is the ranking of territories according to some aggregated dimensions. The OECD report clearly states that CI is formed when individual indicators are compiled into a single index, on the basis of an underlying model of the multi-dimensional concept that is being measured. CIs are valued for their ability to integrate large amounts of information into easily understood formats for a general audience. However, CIs can be misleading, particularly when they are used to rank country performance on complex economic phenomena and even more so when country rankings are compared over time. They have many methodological difficulties which must be confronted and can be easily manipulated to produce desired outcomes. Growth in the number of CIs in various policy domains raises questions regarding their accuracy and reliability. Given the seemingly ad hoc nature of their computation, the sensitivity of the results to different weighting and aggregation techniques, and continuing problems of missing data, CIs can result in distorted findings on territory performance and incorrect policy prescriptions. Despite their many deficiencies, CIs will continue to be developed due to their usefulness as a communication tool and, on occasion, for analytical purposes (OECD, 2008).

Importance and popularity of CIs nowadays is also evident in the EU that is confirmed by the establishment of the Composite Indicators Research Group (COIN) under the Joint Research Centre (JRC) of the European Commission (EC). The EU and its institutions intend to support and improve participation of local and regional authorities in the planning and implementation of the EU policies and activities on the ground also by contributing to improve sound statistics and data by exploring possible new ways of measuring and presenting regional performance. The EU stated that based on the available data from Eurostat, the EU therefore proposes to develop a territorial performance (in all the aspects) indicators/indices, which can provide additional insight into the future potential of territorial (especially local and regional) authorities in meeting the EU targets. Importance of CIs approach for the EU research is confirmed by the number of studies evaluating the level of development in specific thematic topic across the EU territory. Many approaches evaluating the EU in terms of CIs exist, but they are not included in evaluated sample with regard to extent of the paper and with regard to their progress in terms of theory and empiricism, timeliness and validity, e.g. An Indicator for Measuring Regional Progress towards the Europe 2020 Targets (European Commission, 2014), The Regional Lisbon Index (European Commission, 2010), Synthetic index: Regional perspective on the Lisbon Agenda (European Commission, 2007). The number of CIs in existence around the world is growing year by year (for a recent review see e.g. the author's own approaches to the CI issue (Melecký, 2016; Melecký and Staníčková, 2015) or Bandura (2006). CIs can be better to describe rather than to examine several independent indicators separately. On the other hand, they can send misleading messages to policy makers if they are poorly constructed or interpreted as evidenced by Nardo et al. (2005).

#### **4. Conclusion**

Inequality is a key problem facing the EU, and it has significant impacts not only on human well-being, but also on economic performance. This study has tried to show that inequalities in the EU are not a recent phenomenon and that they have in general increased over re-cent

times in most of the EU countries. As a general principle, it is important to note that many differences among people in the EU are created by society and systematically linked to life chances. The only way for the EU to meet these challenges is to not only strengthen economic growth policies through broad-based economic programme promoting marketization but also by resolutely pushing for the expansion of social aspects of the EU model (Allmendinger and Driesch, 2014). The future design of European economic policy must then provide a framework in which the policy instruments essential for a monetary, fiscal, industrial, sectorial, and social policy consistent with full employment and a reduction in inequality play a more prominent role. Europe 2020 is a credible strategy of industrial policy for the future of Europe and has the merits of presenting clear actions, clear targets and a detailed measurement strategy to monitor implementation. Combatting inequality should be considered as an instrumental target for both sustainable and inclusive growth. European policymakers have a long to-do list to foster inclusive growth in Europe (Darvas and Wolff, 2016). In all the countries of the EU, the welfare state has come under intense scrutiny as a result of budgetary pressures and wider societal developments. European social policy responses need national and regional contextualisation. Simultaneously, the EU needs a sense of common purpose and a common policy framework in support of national social policies. Its aim should be to create a virtuous circle whereby both pan-European cohesion and national cohesion are enhanced. Cohesion is about income and employment, but also about other dimensions of well-being.

Measurement of territorial progress with regards to achieving the developmental potential plays a crucial role in improving the prosperity and quality of life in any territories. This process has proved difficult as contemporary views on measurement of territorial development are multidimensional concepts. Several methods of evaluating the level of development exist, most of methods have their own limitations, especially in selection of relevant indicators and weighting scheme. Despite the limitations, several approaches in the form of composite indices has been proposed by the European Union (EU) and subsequent institutions for the EU evaluation in the field of cohesion, competitiveness, entrepreneurship, inclusive society, innovation, regional development and potential, resilience, social progress, etc. The necessity of having performance measured in terms of welfare beyond GDP calls for new approaches capable of simultaneously taking into account economic as well as social and environmental indicators. In recent period, efficiency has become very important part of governments' decisions, and the main reason are financial constraints that public finance need to face in setting of the financial crisis. So in given financial constraints, efficiency of public spending plays quite significant role. The convergence processes of the EU countries must be based on the strong socio-economic growth of GDP, investment flows, new technologies and productivity (Dvoroková, 2016). The recent trends of the EU economic development show a moderate GDP growth and require social legislation improvement, income level, labour market and education system development. Future social development investigations and governmental decisions need a pragmatic approach.

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### **References**

- [1] Allmendinger, J. and Driesch, E. (2014). Social Inequalities in Europe: Facing the challenge. *Discussion Paper P 2014-005*. Berlin: Social Science Center.
- [2] Bandura, R. (2006). A Survey of Composite Indices Measuring Country Performance [online]. [cit. 2018-03-25]. Available at:

- [http://www.thenewpublicfinance.org/background/Measuring%20country%20performance\\_nov2006%20update.pdf](http://www.thenewpublicfinance.org/background/Measuring%20country%20performance_nov2006%20update.pdf)
- [3] Brandolini, A. (2007). Measurement of Income Distribution in Supranational Entities: The Case of the European Union. *Temi di discussione, No. 623*. Rome: Bank of Italy.
- [4] Darvas, Z. and Wolff, G.B. (2016). *An anatomy of inclusive growth in Europe*. Brussels: Bruegel.
- [5] Dvoroková, K. (2016). Method Matters: Essays on the Selected Econometric Techniques for Modelling of Economic Convergence: Essays on the Selected Econometric Techniques for Modelling of Economic Convergence. In *Proceedings of the 3rd International Conference on European Integration 2016*, pp. 161-172.
- [6] European Commission. (2007). *Growing Regions, Growing Europe. Forth Report on Economic and Social Cohesion*. Luxembourg: Office for Official Publications of the European Communities.
- [7] European Commission. (2010). Regional Focus – the Regional Lisbon index. [online]. [cit. 2018-03-25]. Available at: [http://ec.europa.eu/regional\\_policy/sources/docgener/focus/2010\\_03\\_lisbon\\_index.pdf](http://ec.europa.eu/regional_policy/sources/docgener/focus/2010_03_lisbon_index.pdf).
- [8] European Commission. (2014). *An Indicator for Measuring Regional Progress towards the Europe 2020 Targets*. Brussel: European Commission, Committee of the Regions.
- [9] Fojtíková, L., et al. (2014). Postavení Evropské unie v podmínkách globalizované světové ekonomiky. [*The EU's Position in Terms of the Globalized World Economy*]. Ostrava: VŠB-TU Ostrava.
- [10] Fojtíková, L., Staničková, M. and Melecký, L. (2017). Modeling of Human Capital and Impact on EU Regional Competitiveness. In Sánchez, L. J., de la Poza Plaza, E. and Rodriguez, L. A. (eds.). *Modeling Human Behavior: Individuals and Organizations*. New York: NOVA Science Publishers, pp. 133-163.
- [11] Franzini, M. (2009). Why Europe Needs a Policy on Inequality. *Intereconomics*, vol. 44, iss. 6, pp.
- [12] Galbraith, J.K. (2009). Inequality, unemployment and growth: new measures for old controversies. *Journal of Economic Inequality*, vol., 7, iss. 2, pp 189-206.
- [13] Huggins, R. (2003). Creating a UK competitive index: regional and local benchmarking. *Regional Studies*, vol. 37, iss. 1, pp. 89-96.
- [14] Krugman, P. (2008). *The return of depression economics and the crisis of 2008*. London: Penguin.
- [15] Kutscherauer, A., et al. (2010). *Regional Disparities. Disparities in the Regional Development, their Concept, Identification and Assessment*. Ostrava: VŠB-TU Ostrava.
- [16] Martins, N.O., Costa, L., Leitão, A., Marcelo, G., Oliveira, F.G. and Tavares, M. (2015). *The implications of inequality for European economic policy* [online]. [cit. 2018-03-25]. Available at: <http://www.progressiveeconomy.eu/content/implications-inequality-european-economic-policy-0>.



- [17] Melecký, L. (2016). Application of Composite Weighted Indices Approach in Regional Disparities Measurement. In *Proceedings of the 19th International Colloquium on Regional Sciences 2016*. Brno: Masaryk University, pp. 98-106.
- [18] Melecký, L. and Poledníková, E. (2012). Use of Multivariate Methods for Disparities Evaluation in Visegrad Four Countries in Comparison with Germany and Austria. In *Proceedings of 1st International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, pp. 199-210.
- [19] Melecký, L. and Staničková, M. (2015). Contribution to Regional Disparities Measurement: Evidence of Composite Weighted Aggregate Index Based on EU Cohesion Concept. In *Great transformation: recasting regional policy: conference proceedings of The Regional Studies Association Winter Conference*. Seaford: Regional Studies Association, pp. 130-135.
- [20] Meyer, D.F., De Jongh, J. and Meyer, N. (2016). The Formulation of a Composite Regional Development Index. *International Journal of Business and Management Studies*, vol. 8, no.1, pp. 100-116.
- [21] Nardo, M., Saisana, M., Saltelli, A. and Tarantola, S. (2005). Tools for Composite Indicator Building [online]. [cit. 2018-03-25]. Available at: <http://publications.jrc.ec.europa.eu/repository/bitstream/111111111/936/1/EUR%2021682%20EN.pdf>
- [22] OECD. (2008). *Handbook on Constructing Composite Indicators. Methodology and User Guide*. Paris: OECD Publishing.
- [23] Rajan, R. (2010). *Fault Lines: How hidden fractures still threaten the world economy*. New Jersey: Princeton University Press.
- [24] Saisana, M. and Tarantola, S. (2002). State-of-the-Art Report on Current Methodologies and Practices for Composite Indicator Development. *Joint Research Centre – Working paper EUR 20408 EN*. Brussels: European Commission.
- [25] Sala-i-Martin, X. (2006). The world distribution of income: Falling poverty and... Convergence, Period. *The Quarterly Journal of Economics*, 121(2), pp. 351-397.
- [26] Staničková, M. (2017). Can the implementation of the Europe 2020 Strategy goals be efficient? The challenge for achieving social equality in the European Union. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, vol. 12, iss. 3, pp. 383-398.
- [27] Stiglitz, J. (2009). The global crisis, social protection and jobs. *International Labour Review*, 148(1-2), pp. 1-13.
- [28] Sucháček, J. (2013). Investment location from the perspective of urban and regional activities in the Czech Republic. In *Proceedings of the 9th International Scientific Conference on Financial Management of Firms and Financial Institutions*. Ostrava: VŠB-TU Ostrava, pp. 851-857.
- [29] Šotkovský I. (2016). Regional Disparities of the Migration Behaviour in the European Union. In *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 987-995.
- [30] Wishlade, F. and Youill, D. (1997). Measuring Disparities for Area Designation Purposes: Issues for the European Union. *Regional and Industrial Policy Research Paper Number 24*. Glasgow: University of Strathclyde.

## **Globalization, International Trade and Competitiveness: What Links These Concepts? Challenge or Threat for Competitiveness of the World Economic Players – Especially EU, US and China?**

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### **Abstract**

*Globalization generally refers to a process of broadening and deepening of interrelationships in international trade, foreign investment and portfolio flows. The outcome is the creation of a global marketplace for goods and services that is largely indifferent to national borders and governmental influence. Rapid technological change coupled with falls in barriers to international trade, have driven it. Also, World Trade Organization agreements and regional treaties forced domestic markets to open up. This development and the current wave of globalization of the economy has generated widespread interest among countries and within countries in the development and upgrading of national competitiveness. Globalization and national competitiveness are popular issues in economic policy debates of representatives of the world economic leaders, i.e. the post-war triad (in order of the EU, USA, and Japan) compared to rapidly developing BRICS (Brazil, Russia, India, China and South Africa) countries.*

**Keywords:** *China, Competitiveness, European Union, Foreign Trade, Globalization, Performance, World Economy*

**JEL Classification:** *E60, F02, F62, O11, O47*

### **1. Introduction**

In an increasingly global economy the future prosperity of a country depends more and more on the international competitiveness of its firms and industries. Policy-makers at all levels have been swept up in this competitiveness fever. This growing interest may perhaps be partly attributable to their awareness of the fact that all countries are having to contend with raised standards of economic efficiency as a result of the globalization of goods and factor markets. The economy may be competitive but if the economic, social and environmental society suffer too much the country will face major difficulties, and vice versa. Therefore governments in the long run cannot focus alone on the economic competitiveness of their country; instead they need an integrated approach to govern the country. Indeed, governments consistently may view these types' domestic policies as isolationist and limited approaches to economic efficiency (Halásková and Halásková, 2016). Some of the evidence of these changes includes some countries' implementation of economic policies that are designed to attract global investment, the prominent role of cross-border mergers and alliances, and the cooperation among national and sub-national governments. These features of the globalization process point to the need to examine the growing importance of a nation's competitiveness by investigating the

combination of specific competitive advantages as well as a nation's comparative advantages (it is reflected in its ability to create an environment conducive for trade and development).

In the European Union (EU), the process of achieving an increasing trend of performance and a higher level of competitiveness is significantly difficult by the heterogeneity of the EU Member States in many areas. Although the EU is one of the most developed parts of the world with high living standards, there exist significant differences having a negative impact on the balanced development across European countries, and thus weaken the EU's performance in a global context (Melecký, 2012; Muntean et al., 2010). Every European country has common features which affect and drive the competitiveness of all the entities located there, even if the variability of competitiveness level of the entities within the country may be very high.

The concept of competitiveness in the EU is but specific regarding the inclusion of elements of European integration that goes beyond the purely economic parameters. Studying the nature of the EU's competitiveness leads to the investigation of how the combination of comparative and specific advantages contributes to that competitiveness. In this paper we focus on competitiveness of the EU's international trade. The main aim of this paper is to examine competitiveness in the context of European nations by investigating foreign trade and its contribution to these nations' competitiveness. The focus of the research is to explain the impact of foreign trade on the productivity and identification of challenges or threats of competition of the world economic players.

## **2. Globalization and International Trade**

Economic theory suggests that globalization will lead to greater convergence in economic performance (including competitiveness performance) between open economies.

Foreign trade is one of the oldest and historically most important elements of economic relations. Currently, the foreign trade, resp. international trade is one of the most dynamic characters of globalized world economy due to the result of technological progress, the promotion of financial and trade liberalization that have led to the internationalization of production that has become an important tool for global development and growth. The term of globalization means an international interconnection of markets, which is caused due to the increasing mobility of factors of production and decreasing the distance between markets, that makes the national economy more dependent on each other. The impact of globalization is then higher, the greater the openness of national economies. Academics and practitioners have discussed this problematic in many theoretical and empirical studies.

Recent studies deal with the foreign trade based on most of the neoclassical theory approach of foreign trade. The comparative advantages of trade by David Ricardo, as well as the neoclassical Heckscher and Ohlin model dealing with the factor intensity of foreign trade and a new theory of foreign trade created by Paul Krugman, who work with different types of market structures in an environment of rising revenues of scale are used as a basic tools for research and recommendations to modern trade policy. The thoughts of classical political economy's representatives as Adam Smith, David Ricardo or John Stuart Mill, are based primarily on criticism of mercantilist doctrine. A faith of classical economists in the ability of the free market and specialization increase the wealth of the country became the basis for nowadays appearance of most foreign trade relations and it is the main reason for the liberalization of world trade. The original theory of comparative advantage shows the advantages of integration into the international trade on the basis of terms of profitability ratios. During the last century, the theory was subjected to many studies. For example (Drabicky and Takayama, 1979) point to the fact that in a globalized economy do not always apply the laws

of exchange ratios based on Ricardo's theory. Balassa (1965)] enriched the theories of revealed comparative advantage approach.

The neoclassical economists founded the theory of international trade on expanding the comparative advantages of additional factor of production - capital. The most important neoclassical theory is the Heckscher-Ohlin model, which works with both factors of production. Their theorem says that the country will specialize in the production of the goods, which is relatively intensive for the production factor (e.g. capital), which has an economy relatively more in comparison to the second factor of production (e.g. labour). However, the truth of this theory was denied by the American economist Wassily Leontief based on empirical research of the American economy. However, this work has had its critics as well. Many other authors have dealt with the validity of Heckscher-Ohlin model, e.g. Bagicha (1962), Jones (1956), Vanek (1963), Keesing (1966), Baldwin (1971), Leamer (1984) and Trefler (1995). Rybczynski (1955) referred to the situation that increase production of goods intensive in one kind of factor endowment under the influence of an unexpected growth of that factor, while the production of goods intensive in other factor of production decrease, whose abundance has remained the same. Stolper and Samuelson (1982) point to the fact that the economy's opening to foreign trade rises prices of goods of intensive factor, the price of goods also increases and vice versa. This theory was then examined by Metzler (1949), McKenzie (1955) or Chipman (1966). Among other criticisms of neoclassical theory is the fact that it doesn't work with the mobility of production endowments, transaction costs or mutual substitution of production factors. New trade theory is based on the standard model of international trade, which was created by Paul Krugman. This model responds primarily to the fact that each of neoclassical theory is narrowly focused on specific issues of foreign trade, but never affects the international trade as a whole. The second reason is a response to non-existent assumptions of perfect competition. A new theory of foreign trade is based on assumptions of economies of scale and monopolistic competition. This model was later extended to other economic aspects typical of the globalizing economy. Among the best-known studies can be included Ethier (1982), Brander and Spencer (1985), Eaton and Grossman (1986), Krugman (1994), Grossman and Horn (1987) or Grossman and Helpman (1992). The Melitz model (2003) working with heterogeneous firms is the last significant entry into the field of international trade theories.

It is evident that opinions and ideas regarding foreign trade and its benefits were continuously changed and evolved in time. Nowadays, among the most important channels of global integration are international trade and capital flows. Strong cross-border capital flows have been a major phenomenon in the new global economy as more and more countries embrace free markets and undertake trade and investment liberalization. Foreign direct investment (FDI) has strengthened the integration of individual national markets and has been a driving force in world trade and economic growth. Today the most modern and dynamic industries are transnational in scope since they are the result of an integrated system of global trade and production. Therefore, the development options for many countries depend, to a significant degree, on the kind of export roles they assume in the global economy and their ability to proceed to more sophisticated, high-value industrial niches.

Technological changes and the continuous fall in communication and transport costs have been a major factor behind global integration, and most countries are reversing import-substitution policies designed to prevent the need for trade. Governments are increasingly seeking to improve the international competitiveness of their economy rather than shield it behind protective walls. Most of countries have made tremendous progress in education and steady improvements in physical capital and infrastructure, thus boosting their productive capacity and enabling them to compete in world markets. This shift in development strategy has been

reinforced by communication technologies, which have made the world easier to navigate. Goods, capital, people and ideas travel faster and cheaper today than ever before.

International trade has come to occupy the centre stage in the economic activity, growth, and development processes of most modern societies. Today's world economic order (disorder) has simply rendered almost every modern economy to be heavily dependent on its foreign trade sector. And in no aspect is this trend more remarkable than the aspect of international competitiveness and the immense importance it now holds for the prospects of survival or failure of nations in their ability to obtain the maximum economic potentials from international trade. It can be stated that where international trade may be an engine that drives economic growth of nations, international competitiveness represents the fuel that empowers that engine (Ezeala-Harrison, 1999, p. 3).

### **3. International Trade and Competitiveness**

In recent years, the topics about measuring and evaluating of competitiveness have enjoyed economic interest. Although there is no uniform definition and understanding of competitiveness, this concept remains one of the basic standards of performance evaluation and it is also seen as a reflection of success of area (company, country, region) in a wider (international, interregional) comparison. Competitiveness is monitored characteristic of national economies which is increasingly appearing in evaluating their performance and prosperity, welfare and living standards. The exact definition of competitiveness is difficult because of the lack of mainstream view for understanding this term. Competitiveness remains a concept that can be understood in different ways and levels despite widespread acceptance of its importance. The concept of competitiveness is distinguished at different levels – microeconomic, macroeconomic and regional. Anyway, there are some differences between these three approaches; see e.g. (Hančlová and Melecký, 2016; Hančlová and Staníčková, 2013; Melecký and Skokan, 2011; Krugman, 1994).

The need for a theoretical definition of competitiveness at macroeconomic level emerged with the development of globalization process in the world economy as a result of increased competition between countries. In order to understand what the competitiveness is in a national perspective, it is best way to look at definition given by the President's Commission on Industrial Competitiveness (President's Commission on Industrial Competitiveness, 1985): "Competitiveness is the degree to which a nation can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously maintaining or expanding the real incomes of its citizens." This is the most quoted definition in this area, and defines competitiveness from a macro perspective. Many writers (Barrell et al., 2000; Krugman, 1994; Starr and Ullmann, 1988; Tyson, 1988] have also referred to this definition of competitiveness of nations. The definition points out that the ultimate goal of competitiveness is to maintain and increase the real income of its citizens, usually reflected in the standard of living of the country. From this perspective, the competitiveness of a nation is not an end but a means to an end; its ultimate goal is to increase the standard of living of a nation under free and fair market conditions (through foreign trade, production, and investment). It "refers to a country's ability to create, produce, distribute, and/or service products in international trade while earning rising returns on its resources" (Srcoot and Ullmann, 1988, p. 3]. Arguably, national governments' principal goal is to establish an environment that fosters a high standard of living for its citizens by addressing health, safety, laws, and environmental issues. This goal can be achieved, in part, through effective management and allocation of resources for producing the highest attainable level of products. Therefore, it becomes imperative that governments coordinate a comprehensive approach towards trade and investment that incorporates a competition orientation (Feketekuty, 1996).

Indeed, many nations are very cognizant of the fact that internal growth depends upon their ability to sustain trade and attract foreign investment.

The concept of international competitiveness of nations makes sense only within a national economic context. Nations adopt economic and trade policies that directly affect the ability of enterprises and industries engage in international trade and investment. This concept is thus often used in analysing countries' macroeconomic performance. It compares, for a country and its trading partners, a number of salient economic features that can help explain international trade trends. There have been several studies devoted to the competitiveness of international trade. Authors focus either on one particular country and its foreign relations, or discuss the situation of a certain union of countries with respect to its environment or the situation within it. In his book, *The Competitive Advantage of Nations*, Porter (Porter, 1990) observes that national competitiveness is measured by two sets of indicators: "(1) the presence of substantial and sustained exports to a wide array of other nations, and/or (2) significant outbound foreign investment based on skills and assets created in the home country" (p. 19). He notes that the competitive advantage of nations is determined by the strength of their factor endowments; their demand conditions; the competitiveness of firm strategies, structures, and rivalries in major industries; and the strength and diversity of related and supporting industries. It should be emphasized here that openness to global markets and the internationalization of economies play an increasing role in productivity and competitiveness enhancement.

#### **4. Conclusion**

There is little doubt that international trade is vital to a nation's wealth. Trade increases access to global resources and extends market reach. Certainly, one of international trade's fundamental principles is that cross-border trade enables global trade efficiency. The argument that is generally presented is that individual countries are able to maximize their potential for growth because they are able to trade particular export commodities in which they have a comparative advantage. At the same time, the country will import those commodities in which they do not have comparative advantages. This situation creates an ideal balance of freer world trade that ultimately contributes to global efficiencies through specialization. Under these considerations, it becomes apparent that countries may not have a choice but to adopt and implement policies that are designed to employ national resources efficiently. Otherwise, countries may end up squandering their resources on unproductive commodities.

The dynamics of economic, social, political and cultural change in the contemporary world are increasingly shaped by the pursuit and promotion of competitiveness. Competitiveness of economies in integrated world determines how well they convert the potential created by access to global markets into opportunities for their economic subjects. The world economy is changing in the face of growing competition as consequence of globalisation processes. These processes result in changing position of global economic powers, emergence of new powers, and thus in new distribution of global forces. It leads to importance of deeper study of factors affecting competitiveness and influencing the growth with respect to competitors and market players. As part of the follow-up research, due to the interconnectedness of world economies as a result of globalisation processes, it is desirable to analyse macroeconomic competitiveness not only for economic objectives but the other ones. Competitiveness is multifactor conditional, it is necessary to include social, environmental, institutional, etc. aspects. In reality, improving competitiveness simply means to create conditions that allow economy to allocate scarce resources where opportunities arise as external and internal conditions change. Understanding of how policies interact to affect competitiveness, at macroeconomic level is important. Competitiveness is often presented as a relative concept, which leads many to see competitiveness policy as a zero-sum game. Competitiveness of economies in integrated world

determines how well they convert the potential created by access to global markets into opportunities for their economic subjects. In reality, improving competitiveness simply means to create conditions that allow economy to allocate scarce resources where opportunities arise as external and internal conditions change. At global level, uncooperative national policies are a primary constraint to competitiveness. And as production increasingly transcends borders, the spill over effects of domestic policies multiply in number and size. Improving competitiveness is as much a collective effort as an individual one. Countries that want to boost productivity of own economies need to cooperate to have functioning and up-to-date supranational institutions and frameworks (WEF, 2015; Fojtíková, 2013). The world economy is changing in the face of growing competition as consequence of globalisation processes. These processes result in changing position of global economic powers, emergence of new powers, and thus in new distribution of global forces. This leads to importance of deeper study of factors affecting competitiveness of economies and can influence its growth, also with respect to existing competitors and strong players.

In this connection, the EU Communication called Global Europe: Competing in the World (EC, 2006, p. 20) is the initial idea for the further research: "China is the biggest single challenge of globalisation in the trade field and a test for our capacity to make globalisation an opportunity for jobs and growth." It is obvious the continuity of the EU's growth strategies (the earlier Lisbon Strategy, the current Europe 2020 Strategy). As part of the follow-up research, the aim will be to assess development of the EU and China, resp. of all global economic powers. Due to the interconnectedness of world economies as a result of globalisation processes, it is desirable to analyse competitiveness of these entities not only for economic objectives but the other aspects. Competitiveness is multifactor conditional, it is necessary to include social, environmental, institutional, etc. aspects. Also, stage of economic development plays key role in strengthening of competitiveness. World Economic Forum applied this concept of Michael Porter (1990) for competitiveness evaluation of countries in Global Competitiveness Report too. Each stage of development (economy is driven by productive factors, investment-driven economy, and innovation-driven economy) corresponds to another type of competitive advantage, i.e. generally cost-effective or qualitative one. Competitive advantage is related to ability of economy to compete, and also with needs of economy for concrete measures to improve its position – this differs naturally across stages of economic development. For example, China mentioned in the EU Communication (EC, 2006) as country that is currently the biggest opportunity, challenge and also threat. China faces great challenges in terms of addressing socially and environmentally friendly issues in terms of competitiveness and international trade relations. This fact is in line with its stage of economic development and corresponding competitive advantages (Vahalík and Fojtíková, 2016). Follow-up research will orientate on input factors, i.e. driven forces of competitiveness of countries in international comparison and analysis of their competitive advantage and disadvantages. Understanding of how policies and institutions interact to affect competitiveness, at level of economy is important.

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### ***References***

- [1] Bagicha M. S. (1962). The Homohypallagic Production Function, Factor-Intensity Reversals, and the Heckscher-Ohlin Theorem. *Journal of Political Economy*, vol. 70, pp. 138-138.

- [2] Balassa B. (1965). Trade Liberalisation and „Revealed“ Comparative Advantage. *The Manchester School*, vol. 33, pp. 99-123.
- [3] Baldwin R. (1971). Determinants of the Commodity Structure of U.S. Trade. *American Economic Review*, vol. 61, pp. 126-145.
- [4] Barrell, R., M. and G., O'Mahony, M. (2000). *Productivity, Innovation and Economic Growth*. Cambridge: Cambridge University Press.
- [5] Brander J. and Spencer, B. (1985). Export Subsidies and Market Share Rivalry. *Journal of International Economics*, vol.18, pp. 83-100.
- [6] Chipman J. S. (1966). A Survey of the Theory of International Trade. *Econometrica*, vol. 34, pp. 18-76.
- [7] Drabicky J. H. and Takayama, A. (1979). An Antimony in the Theory of Comparative Advantage. *Journal of International Economics*, vol. 9, pp. 211-223.
- [8] Eaton J. and Grossman, G.M. (1986). Optimal Trade and Industrial Policy Under Oligopoly. *Quarterly Journal of Economics*, vol. 101, pp. 383-406.
- [9] Ethier W. J. (1982). National and International Returns to Scale in the Modern Theory of International Trade. *American Economic Review*, vol. 72, pp. 389-405.
- [10] European Commission. (2006). *Global Europe: Competing in the World*. [online] [cit. 2018-03-22]. Available at: [http://trade.ec.europa.eu/doclib/docs/2006/october/tradoc\\_130370.pdf](http://trade.ec.europa.eu/doclib/docs/2006/october/tradoc_130370.pdf) [Accessed 06. 06. 2017].
- [11] Ezeala-Harrison, F. (1999). *Theory and Policy of International Competitiveness*. Santa Barbara: Praeger.
- [12] Fojtíková, L. (2013). Quantitative Evaluation of the EU's Export Potential to Russia Using the Gravity Model. In *Mathematical Methods in Economics 2013. Jihlava: 31st International Conference on Mathematical Methods in Economics*. Jihlava: Polytechnical University Jihlava, pp. 171–176.
- [13] Grossman G. M. and Horn, H. (1987). Infant Industry Protection Reconsidered: The Case of International Barriers to Entry. *Quarterly Journal of Economics*, vol. 53, pp. 767-787.
- [14] Grossman, G.M. and Helpman, E. (1992). *Innovation and Growth: Technological Competition in the Global Economy*. Massachusetts: MIT Press.
- [15] Halásková, M. and HALÁSKOVÁ, R. (2016). Assessment of Financial Capabilities of Local Governments in EU Countries for the Development of Local Public Services. *Lex Localis Journal of Local Self – Government*, vol. 14, iss. 3, pp. 379-397.
- [16] Hančlová, J. and Melecký, L. (2016). Application of the Nonparametric DEA Meta-frontier Approach with Undesirable Outputs in the Case of EU Regions. *Business Systems Research Journal*, 2016, vol. 7, iss. 2, pp. 65-77.
- [17] Hančlová, J. and Staníčková, M. (2013). Measuring the Effectiveness Factors in New EU Member States through DEA Approach. *International Journal of Mathematical Models and Methods in Applied Sciences*, vol. 7, iss. 5, pp. 479-489.
- [18] Kessing D. B. (1966). Labour Skills and Comparative Advantage. *American Economic Review*, vol. 56, pp. 249-258.
- [19] Krugman, P. (1994). Competitiveness: A Dangerous Obsession. *Foreign Affairs*, vol. 73, iss. 2, pp. 28-44.



- [20] Leamer E. E. (1984). *Sources of International Comparative Advantage*. Massachusetts: MIT Press.
- [21] McKenzie L. W. (1955). Equality of Factor Prices in World Trade. *Econometrica*, vol. 23, pp. 239-257.
- [22] Melecký, L. (2012). Evaluation of Cohesion in Visegrad Countries in Comparison with Germany and Austria by Multivariate Methods for Disparities *Measurement, International Journal of Mathematical Models and Methods in Applied Sciences*, vol. 6, iss.8, pp. 979-989.
- [23] Melecký, L. and Skokan, K. (2011). EU Cohesion and Its Evaluation in the Case of Visegrad Four Countries. In *Liberec Economic Forum 2011. Proceedings of the 10th International Conference*. Liberec: Technical University of Liberec, pp. 314-326.
- [24] Melitz M. J. (2003). The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity. *Econometrica*, vol. 71, pp. 1695–1725.
- [25] Metzler L. (1949). International Demand and Domestic Prices. *Journal of Political Economy*, vol. 57, pp. 345-351.
- [26] Muntean, M., C., Nistor, R. and Nistor, C. (2010). Competitiveness of developing regions in Romania. *WSEAS Transactions on Business and Economics*, vol. 7, iss. 3, pp. 252-261.
- [27] Porter, M.E. (1990). *The competitive advantage of nations*. New York: The Free Press.
- [28] President's Commission on Industrial Competitiveness (1985). *Global Competition: The New Reality*. Washington: U.S. Government Printing Office.
- [29] Rybczynski T. M. (1955). Factor Endowment and Relative Commodity Prices. *Economica*, vol. 22, pp. 336-341.
- [30] Sroocot, B. R. and Lodge, C. (1985). *US Competitiveness in the World Economy*. Boston: Harvard Business School Press.
- [31] Starr, M. K. and Ullmann, J. (1988). *The Myth of Industrial Supremacy. Global Competitiveness*. New York: W. W. Norton & Company.
- [32] Stolper W. F. and Samuelson, P. A. (1941). Protection and Real Wages. *Review of Economic Studies*, vol. 9, pp. 58-73.
- [33] Trefler D. (1995). The Case of the Missing Trade and Other Mysteries. *American Economic Review*, vol. 85, pp. 1029-1046.
- [34] Tyson, L. (1988). *Competitiveness: An Analysis of the Problem and Perspective on Future Policy. Global Competitiveness*. New York: W. W. Norton & Company.
- [35] Vahalík, B. and Fojtíková, L. (2016). Trade with BRICS: Effect of Transportation Costs. In Kovářová, E., L. Melecký and M. Staničková (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB - Technical University of Ostrava, pp. 1030-1042.
- [36] Vanek J. (1963). *The Natural Resource Content of United States Foreign Trade 1870 – 1955*. Massachusetts: MIT Press.
- [37] WEF. (2015). *The Case for Trade and Competitiveness*. Geneva: WEF.

## **European Integration in the Form of Subsidies in the Field of Monument Care**

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### **Abstract**

*The article highlights the issue of reconstruction of EU-funded historical monuments (through calls) and the role of subsidy titles in the context of cultural heritage protection. The examples from the Czech Republic and the Moravian-Silesian Region outline some pitfalls in the reconstruction of heritage buildings, consisting in particular in specific requirements, imposing high financial demands on investors and the expertise of implementing companies. The author draws attention to the long-term and strong underfinancing of the area of cultural heritage care in the Czech Republic and the significantly different overall character of the Czech Republic's heritage fund compared to the traditional EU countries. The text highlights the great importance of pre-project preparation of the construction and its impact on the overall budget. An example of implementation that has received the highest European award in the field of monument care highlights the great importance of European subsidies in the field of cultural heritage care.*

**Keywords:** *calls, Czech Republic, Europa Nostra, European Union, IROP, monuments, Subsidies*

**JEL Classification:** *H20, F63, Z19, Z32*

## **1. Introduction**

The area of monument care is a field with more than a hundred years of tradition and a huge, though not at first sight obvious, economic and cultural benefit. European integration has not escaped this field in the good sense either.

It manifests itself in several different ways. Perhaps the most tangible is the direct cooperation in the area of reconstruction of monuments, funded by a wide range of subsidies. In terms of volume of funding, a number of subsidies, the common denominator of which is the European Union, are very important. These subsidies with different names have a common denominator, which is a large sum for the reconstruction of buildings. This distinguishes them from a number of subsidies provided by the Czech state. The disadvantage is the complicated administration when drawing subsidies with a number of conditions. EU funding is allocated through calls from the so-called IROP (Integrated Regional Operational Programme).

### **1.1 EU Funding**

EU funding is allocated through calls from the so-called IROP (Integrated Regional Operational Programme).

### *1.1.1 IROP Calls*

In total, IROP managed to announce 76 calls worth 111.5 billion CZK (Quarterly of Integrated Regional Operational Programme, [online] 02/2017). At the end of August 2017, 2 596 applications worth over 44 billion CZK were positively evaluated. In the area of culture which accounts approximately for 8,5% of the total funds, grants for monuments are awarded from calls No. 13 proclaimed for the revitalization of selected monuments, announced in November 2015, from call No. 21 „Museums“, and call No. 52 „Revitalization of Selected Monuments“ II and call No. 76 „Museums II“, announced in August 2017.

### *1.1.2 Call no. 13*

Under call No. 13, 54 projects were approved for more than 3 billion CZK. These included, for example, the revitalization of Kost Castle, the reconstruction of the national cultural monument of Karnola in Krnov, the reconstruction of the Cathedral of St. Bartholomew in Pilsen, digitizing Sv. Kopeček Church in Olomouc and others. For the great interest in call No. 13, call No. 52 was again proclaimed, with a budget of 1.55 billion CZK. This call was exceeded by the applicants approximately 3 times. The projects submitted in this call are now in the approval process and, at the same time, during the month of August, the volume of funds was increased to 3.1 billion CZK.

### *1.1.3 Call no.21*

Under call No. 21 „Museums“, designed to protect and use collection and library funds, preservation and restoration of collection items, digitization of collections, construction of new depositories and new expositions. From this call 39 projects with a value of 2.1 billion CZK were approved. The supported museums include, for example, the TATRA Car Museum in Kopřivnice, the Museum of Těšín or the Comenius Museum in Přerov, the opening of new exhibition rooms at the Roštejn Castle, the reconstruction of the castle in Studénka Nová Horka and others.

### *1.1.3 Call no.76*

On 17 August 2017, a new call No. 76 „Museums II“ was announced in the total value of 900 million CZK. Support for cultural heritage also continues under calls No. 41, 48 and 55 of the IROP for integrated instruments. Monumentally protected buildings and museums are becoming more and more the target of trips and hide tremendous potential, so they are present an investment for the future (Quarterly of Integrated Regional Operational Programme, [online] 02/2017).

**Table 1: IROP Calls in the Field of Monument Care**

Call no.	Name of the Call	Allocated EU funds (in million CZK)
76	Museums II.	900
55	Cultural Heritage – Integrated CLLD Projects	427.5
52	Revitalization of Selected Monuments II.	1,500
48	Strengthening the Presentation, Enhancing the Protection and Development of Cultural Heritage – int. Proj. ITI	1,140
41	Strengthening the Presentation, Enhancing the Protection and Development of Cultural Heritage – int. Proj. IPRÚ	503.8
21	Museums	2,115
13	Revitalization of Selected Monuments	3
Total		9,580

Source: <http://www.strukturalni-fondy.cz/cs/Microsites/IROP/Vyzvy>

## 2. Problem Formulation and Methodology

Reconstruction of protected buildings is one of the most difficult tasks in the building industry. A number of specific activities, without which reconstruction would have been impossible, follows up with ordinary construction work. It is necessary to coordinate common construction works with specialized craft work and restoration work, archaeological surveys and a number of specific requirements from the area of heritage care, firemen, hygiene, etc. All these, often contradictory, requirements need to be aligned. Therefore, the design phase is key to the reconstruction process (Henderson, Nakamoto 2016). Specialized craftwork and restoration work, which runs in other way than usual renovation work, necessarily increases the budget of the construction and from the very beginning of the design preparation it is necessary to count with this fact. Well-managed project and a properly designed budget is necessary not only for the approval of the project and the grant of the subsidy, but also for the successful implementation of the restoration of the monument. A large group of people of different professions is involved in the process of reconstruction from the very beginning.

Despite the great efforts of a number of professionals in various professions, the successful reconstruction of monuments sometimes hits the often unjustified criticism from the public (Lithgow 2013). It is argued that the invested means are "not visible", which is often the case with specialized restoration works. The public also criticizes the size of renewal of individual building parts, which is either too big or too small in their eyes. Even with the reconstruction of Kuks, awarded the Grand Prix Europa Nostra, these comments were raised by the public. A large percentage of highly specialized work generates a number of uncertainties that manifest only during the implementation and which often have a relatively large impact on the budget of the construction. This is closely related to the fact that investors, but sometimes also grant providers, are particularly underestimated in the survey phase, which includes a number of specialized activities from various fields.

Even if the survey phase is well-done, often the actual realization of the building is not surprising in the form of increased costs - due to a worse condition than expected (National Heritage Institute [online] 2017). Typical examples are restoration work on altar architectures, which at first glance look cohesive, but after the dismantling of the piece, a large extent of destruction of wood appears under a series of glue-chalk polychromic layers. Restoration of

the destruction of such wood piece is financially expensive and petrification is sometimes not even possible. This is why the copies have been used to replace the original work which is also very expensive. In the case of these works, it involves amounts in the order of hundreds of thousands CZK. The restoration of altars is usually in the order of millions of CZK, and, in case of an unexpected bad condition, the budget for the repair can be greatly increased.

Also, the revelation of the original wall paintings can provide a number of surprises, which can have an immediate effect on the budget of the work. Wall painting hidden under the newer layers of plasters and paints may be more damaged than expected from the probes made, or may be completely absent. After the discovery, the investor faces the problem of what to do with such a preserved and exposed painting. To preserve, reconstruct, or combine both? The final verdict is not only a question of the concept of restoration intervention related to monument care, but also a financial issue that has a considerable impact on the budget of the work (Girsa V. et al. 2004). Therefore, it is necessary to count on the exploratory phase of the design (even destructive) that at least partially eliminates these unexpected costs of the work.

A high level of monument care in the Czech Republic was confirmed by the Europa Nostra 2017 European Heritage Prize („Oscar“ prize for monuments), which our country won this year with a project of reconstruction of the baroque premises of the Kuks Hospital funded by the Integrated Operational Programme, the predecessor of IROP. Extensive and costly reconstruction of Kuks could not have taken place without EU funds. „Renovation of the Kuks Hospital as an integral part of the building and landscape protection project is of the highest quality. Its multidisciplinary and interdisciplinary approach is considered commendable and should serve as a convincing example for other renewal projects in Europe“ (Europa Nostra [online] 2017), states the preamble to the Grand Prix Europa Nostra.

## 2.1 Model and Data

Reconstruction of Kuks has been exceptional within the EU and the Kuks complex itself is exceptional. Franz Anton Sporck built a unique complex in Europe that included a spa with a castle on one side and on the other side a baroque landscape with a hospital, garden, monastery and cemetery. To this day, however, the area has been preserved in a torsional state, the castle building disappeared in the past.

**Figure 1: Southern, Former Economic Wing Before Reconstruction (left)**

**Figure 2: Southern, Former Economic Wing, Nowadays Herbarium and Theatre**



Source: National cultural monument

### **3. Problem Solution**

In 2009, a working group was set up to prepare a grant application. In the course of 2009, documentation was prepared as part of the pre-project preparation. The historical building survey, the geodetic survey of the complex, the evaluation of the construction technical condition of the buildings within the hospital and the reconstruction of the hospital garden and the green area were carried out. A key document was the study of the feasibility and economic evaluation of the project, essential for the project application as well as for its own project. The general reconstruction of the extensive baroque Kuks complex took place in the period 2013-2015 and the final price was 453 million CZK (National Heritage Institute [online] 2017).

The project documentation for the reconstruction and future use of the site was elaborated. In May 2010 the application was positively evaluated and it was decided to allocate a European subsidy for the reconstruction of the hospital area (Revitalizace Kuks [online] 2017). In 2011, the construction site and rescue archaeological survey of the site was launched in the amount of 6,102,000 CZK while the necessary territorial and building permits were issued. In April 2013, a tender for the construction contractor took place, won by the Hochtief - Gema Art association. In the course of 2014, the entire complex of Kuks hospital was closed and construction works, archaeological research and restoration work started. Not only buildings, but also gardens were restored.

The reconstructed premises have gained new cultural use. There is a ceramic workshop, accommodation spaces, expositions, a theatre, and a variety of events focused on various interest groups. The main bearer of the project was the site administrator, the National Heritage Institute, regional office in Josefov, the partners of the project were also the Faculty of Pharmacy of Charles University, the Museum of East Bohemia in Hradec Králové, the Hradec Králové Region, the town of Kuks and others. Pharmacy students in the hospital will be attending part of the lessons related to the historical development of their disciplines (Drha 2005). The products of the restored herb and fruit gardens will be used in follow-up educational programmes, which also involve active engagement of the public. Relatives of patients with multiple sclerosis will attend seminars focused on the ability to cope with severe family illness. There will be thematic history and art lectures, seminars and workshops for the professional and non-professional public or teaching programmes for schools. The depositories and library of the Kuks monastery will be made available to researchers (Revitalizace Kuks [online] 2017). The successful reconstruction has also been positively reflected in the attendance and economic benefits of the hospital (see Table 2 and Figure 3 below).

**Table 2: Total Arrivals of Visitors at Kuks Hospital from 2003 to 2017**

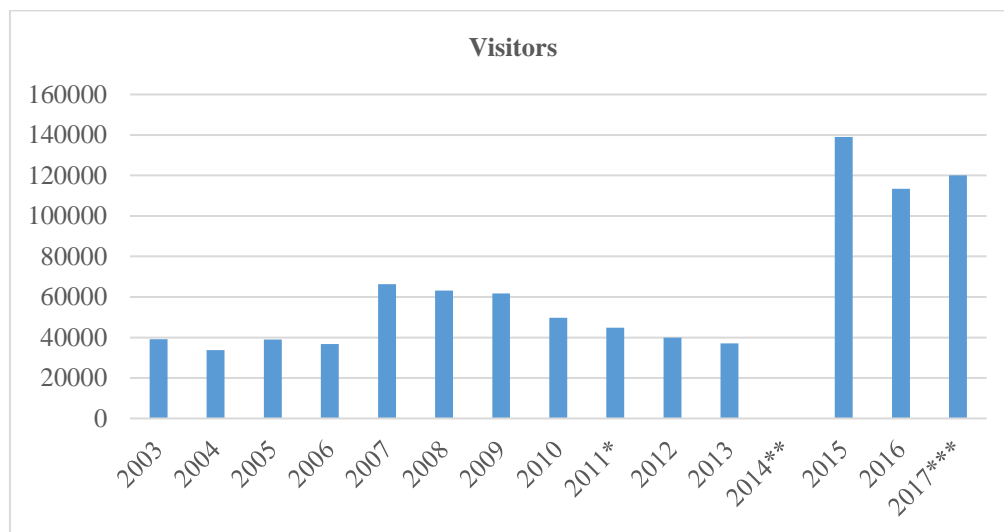
Year	Visitors
2003	39 108
2004	33 801
2005	39 052
2006	36 712
2007	66 296
2008	63 205
2009	61 683
2010	49 752
2011	44 853*
2012	39 957
2013	37 064
2014	0**
2015	139 016
2016	113 362
2017	120 000***

Source: the Colosseum cash register, National cultural monument Hospital Kuks

\* Beginning of reconstruction November 2011

\*\* Monument closed due to reconstruction

\*\*\* Figures for 2017 are estimates

**Figure 3: Development of Visitor Arrivals at Kuks Hospital 2003-2017**

Source: own elaboration (2017)

The reason for the increase of visitors in 2007 was the extension of the existing hospital exposition and the opening of the Count Sporck tomb. Six new rooms were also opened within the existing guided tour. The gradual drop in visitor arrivals since 2010 is related to the dampening of activities and investments in connection with the expected start of the Kuks -

Pomegranate project. In 2014, the monument was closed for the visitors due to reconstruction. The increase in attendance in 2015 relates to the completed reconstruction of the Kuks - Pomegranate project.

#### 4. Conclusion

However, much more examples of reconstruction of monuments with EU money can be given. That is not the purpose of this paper. The aim is to show the positive role that the EU has in the field of cultural heritage conservation (Kouřilová, Pělucha 2017). The nature of the defects of the historical buildings is different in the former Eastern Bloc countries than in the West. In the former Eastern Bloc countries, which also applies to the Czech Republic, the continuity of ownership and hence the care for cultural wealth were broken.

After the accession of the Czech Republic to the EU, a number of unused sites of immense historical and economic value remained in the territory of the country and could not be repaired without a considerable amount of funds.

The area of cultural heritage care has been significantly underestimated in the Czech Republic for more than 60 years (and the post-revolutionary period has not changed that) and without the EU's help, the reconstruction of a number of buildings could not be conceived at all.

Another specific feature of the monument fund is a large number of castle and chateau complexes with wealthy state-owned mobiliary funds. While these buildings generate significant income from entry, events and leases, maintenance costs are often higher than profits.

However, these buildings are the "family silver" of the Czech state, it is necessary to take care of them adequately and to see them as a property that does not lose its value over time, but increases. Here too, the area of EU subsidies is particularly important. The repaired cultural monuments are a magnet for visitors who, in addition to their own visits to the monuments, need services in the form of accommodation capacities, restaurants, shops. This has a positive impact on employment in the area and the development of the region. Nowadays, when Europe is thriving in the belief of the migration crisis, cultural heritage in the form of cultural monuments is more than ever an important symbol of our European Christian identity and an indicator of the nation's culture, capable and willing to take care of the ancestral heritage. Investing in the restoration of cultural heritage is an investment in the future.

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#### *References*

- [1] Brzáková, K. and Šímanová, J. (2014). Evaluation of the Implementation of Selected Regional Operational Programs with a Focus on Public Projects Economic Efficiency. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 51–58.
- [2] Drha, J. (2005) Pharmaceutical literature in the library of the Kuks Hospice I. A contribution to the history of the hospital pharmacy of the Brethren of mercy called "the pomegranate" at Kuks, *Česká a Slovenská Farmacie* Volume 54, Pages 275-282, Issue 6, 2005



- [3] Europa Nostra, [online]. [cit.2017-09-04], Available at: <http://www.europanostra.org/success-two-czech-heritage-projects-awards-2017-celebrated/>.
- [4] Girsá V. et al., Pre-project preparation and project documentation in the process of care for building monuments, Prague 2004. Available at: <https://www.npu.cz/cs/npu-a-pamatkova-pece/npu-jako-instituce/publikace/7405-predprojektova-priprava-a-projektova-dokumentace-v-procesu-pece-o-stavebni-pamatky>.
- [5] Henderson J., Nakamoto T. (2016). Dialogue in conservation decision-making, *Studies in Conservation*, Volume: 61 Special Issue: SI Supplement: 2 Pages: 67-78, 2016
- [6] Kouřilová J., Pělucha M. (2017) Economic and social impacts of promoting cultural heritage protection by the Czech rural development programme 2007-2013, *European Countryside, The Journal of Mendel University in Brno*, Volume: 9 Issue: 3 Special Issue: SI Pages: 486-503, 2017
- [7] Lithgow K. (2013) Communicating conservation science, Conference: ICCROM Forum on Conservation Science Conference Location: Rome, ITALY October 16-18, 2013
- [8] Quarterly of Integrated Regional Operational Programme, 02/2017, [online]. [cit.2018-02-22]. Available at: [http://www.dotaceeu.cz/getmedia/258b2308-ed4f-47d8-b289-7c1c0ad3198a/Newsletter-2\\_2017\\_6.pdf?ext=.pdf](http://www.dotaceeu.cz/getmedia/258b2308-ed4f-47d8-b289-7c1c0ad3198a/Newsletter-2_2017_6.pdf?ext=.pdf).
- [9] Quarterly of Integrated Regional Operational Programme, 02/2017, [online]. [cit.2018-02-22]. Available at: [http://www.dotaceeu.cz/getmedia/258b2308-ed4f-47d8-b289-7c1c0ad3198a/Newsletter-2\\_2017\\_6.pdf?ext=.pdf](http://www.dotaceeu.cz/getmedia/258b2308-ed4f-47d8-b289-7c1c0ad3198a/Newsletter-2_2017_6.pdf?ext=.pdf) and <http://www.dotaceeu.cz/cs/Microsites/IROP/Verejnost/Prehledy-projektu-a-vyzev>.
- [10] Revitalizace Kuks, [online]. [cit.2018-02-23], Available at: <http://www.revitalizacekuks.cz/co-delame/projekty/rekonstrukce-hospitalu/>.
- [11] Revitalizace Kuks, [online]. [cit.2018-02-23], Available at: <http://www.revitalizacekuks.cz/co-delame/projekty/rekonstrukce-hospitalu>.

## Is the EU Internal Market Working for Business Services?

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### **Abstract**

*Business services play an increasingly important role in the European economy. At the same time, they are suffering from different barriers regarding their provision within the EU internal market. Therefore the European Commission has taken steps to improve functioning of the internal market for business services. The aim of the paper is to discuss the present situation in European business services sector in the light of fulfilling the internal market idea. The conclusion is that due to the regulatory heterogeneity and administrative obstacles the aim of the internal market idea has not been achieved. Furthermore, the negative appraisal of the last proposal of the European Commission by some Member States and the European advisory institutions is not a good prognostic to the possibility of fulfilling and strengthening the internal market in the business services sector in the EU.*

**Keywords:** barriers, business services, internal market, regulatory heterogeneity

**JEL Classification:** F15, F55, O52

### **1. Introduction**

Business services play an increasingly important role in the European economy as high-quality business services are crucial to its competitiveness, as well as in recent decades have been an area where most jobs have been created. At the same time, the business services sector is suffering from different barriers regarding their provision within the EU internal market. Some barriers are natural (e.g. language, features of the type of service), other are of regulatory and administrative nature. In 2012 only 3% of architects worked in another EU Member State, and less than 2% of accountants applied to establish an office or to work temporarily across the EU borders in 2014 (Doemeland et al, 2016). In 2015 the European Commission has taken first actions to improve functioning of the internal market for business services, what resulted in the proposal of service package in 2017. The aim of the paper is to discuss the present situation in European business services sector in the light of fulfilling the internal market idea. To achieve the aim the following issues will be analysed: the importance of business services for the European economy, types of barriers hampering the free provision of business services in the EU internal market, regulatory heterogeneity and actions that have been undertaken by the European Commission towards the realization of the internal market concept regarding business services. The paper is based on the analysis of the European documents and literature on the topic, as well as using data from the Eurostat database. The regulatory heterogeneity and restrictions in business services sectors are analysed based on raw data contained in the OECD database on Service Trade Restrictiveness Index.

## 2. Setting the Scene

Business services involve one company providing services to other companies in support of their activities. The concept of business services covers a broad spectrum of services ranging from professional (e.g. software and computer services, strategy and management consultancy, legal and tax advice, auditing, advertising, headhunting) through technical services (e.g. design, engineering, or architectural services) to operational support (e.g. administration, bookkeeping, security services, facility management, labour recruitment, industrial cleaning) (Kox and Rubalcaba, 2007; Thelle and Nielsen, 2013). Professional services and technical services are often combined and labelled “knowledge based services” or “knowledge intensive business services”. The business services sector refers to the economic activities covered by NACE Rev. 2 Divisions 62, 69, 71, 73 and 78 and Groups 58.2, 63.1 and 70.2, and the enterprises or parts of enterprises that carry out those activities (Eurostat [online], 2018a).

The business services sector has experienced a remarkably strong growth process in the past two decades, in term of both value added and employment. In 2003 business services generated 1,067 billion euro accounting for 11% of the total EU15 economy with around 19 million workers (Kox, Rubalcaba 2007), whether in 2009 it reached 1,518 million euro (11,7% of the EU27 economy) with 20.5 million of people employed (European Commission 2012). But the most spectacular growth in development of business services sector has appeared in last few years and in 2016 it accounted for nearly 12% of the EU28 value added with over 29 million people employed (Eurostat [online], 2018b).

The same phenomena is noticeable in all EU Member States, however the situation is quite different between them. Based on the data provided by Eurostat ([online], 2018b), we have noticed that the biggest business services sector in value terms is in Germany with €312,6 billion of turnover in 2016, followed by United Kingdom (€264,2 billion) and France (€262,5 bln). However taking into consideration the share of business services sector in country’s value added and employment, the leaders are the Netherlands (15,1% and 20,8% respectively) and Belgium (14,2% and 19,5%). They are followed by France, Malta, United Kingdom and Luxembourg with over 12% share in country’s value added and over 14% share in employment. The least business services oriented economies are Greece (5,1% for value added share), Bulgaria, Czech Republic and Lithuania (below 7% of value added).

The development of companies together with changes in technologies and outsourcing processes are incentives for increase in international trade in services. Business services are amongst the ones to be traded the most. In 2016, export of business services accounted for 26% of total UE export, while import for 30%. In both cases intra-EU trade prevailed over extra-EU, however as for export difference was very small (51% for intra-EU versus 49% for extra-EU trade) whether for import slightly bigger (54% intra-EU versus 46% for extra-EU) (WTO [online], 2018).

## 3. Regulations and Barriers in Provision of Business Services in the EU

The business services sector in the EU is regulated on two levels: community and national. The basic principles are set up by the EU treaty provisions concerning the internal market that constitute the basis for more detailed regulations. In the case of business services it is the Services Directive (123/2006). The Services Directive offers a harmonised framework for making better use of the classical single market freedoms of physically providing services cross-border or setting up an establishment in another Member State (European Commission 2017a). Therefore the aim of the Directive was twofold: firstly, to eliminate obstacles to the development of service activities between Member States and, secondly, the establishment of

general provisions facilitating the exercise of the freedom of establishment for service providers and the free movement of services, while maintaining a high level of quality of services. It should be emphasized that the Services Directive applies only to requirements which have a direct impact on the taking up and pursuit of service activities, and does not apply to requirements which should be followed in conducting such activities (Stefaniak 2016).

Free movement and free establishment in services, so then in business services, across intra-EU borders is guaranteed by the supranational regulations, however there are still barriers hampering the realisation of the European internal market. That happens because, firstly, the Member States used different implementation strategies (Stelkens, Weiss and Mirschberger 2012) and, secondly, the Services Directive does not intend to harmonise national regulations leaving room to different attitudes and solutions to be applied. As Mustilli and Pelkmans (2013) noticed, the Services Directive has undoubtedly reduced regulatory heterogeneity in the domains with relatively light regulatory requirements, but in more heavily regulated service sectors this heterogeneity is still rather high, becoming an obstacle to market access.

The obstacles in the business services sector can be recognised as regulatory or administrative barriers that might affect the free provision of business services in the form of cross-border transaction or establishment or both. The European Commission (2015a, 2015b, 2017b) has recognised the following barriers regarding business services:

a. Regulatory barriers:

- various authorisation regimes in scope and types of business services.
- requirements on the legal form of service providers, their shareholding structure, the allocation of voting rights and management positions.
- requirements on compulsory chamber membership.
- a considerable number of insurance requirements.
- strict requirements in several Member States in relation to multidisciplinary activities.
- multiple authorisations, registration or prior notification requirements.
- impose of tariffs by some Member States concerning different business services.
- restrictions on advertising and marketing activities.

b. Administrative barriers:

- a substantial number of documents required in certified or authenticated form and lack of acceptance of documents of equivalent purpose for the authorisation schemes or notification procedures.
- multiple authorisations, registration or prior notification requirements that are also complicated, lengthy (up to six months) and costly to comply with.
- handling fees - authorities may charge fees for the initial authorization and for (often compulsory) membership.
- differentiation of time validity of authorizations and therefore need to renew authorization at different time and cost.
- weak performance of the Points of a Single Contact – lack of business information in other languages than a native one, different structure of the information content, little or no online information on requirements available (registration forms for authorization procedures can usually be downloaded from the websites of the chambers).
- lack of electronic registration and authorisation possibility in most of Member States – need to send documents by regular mail or sometimes even to deliver in person.

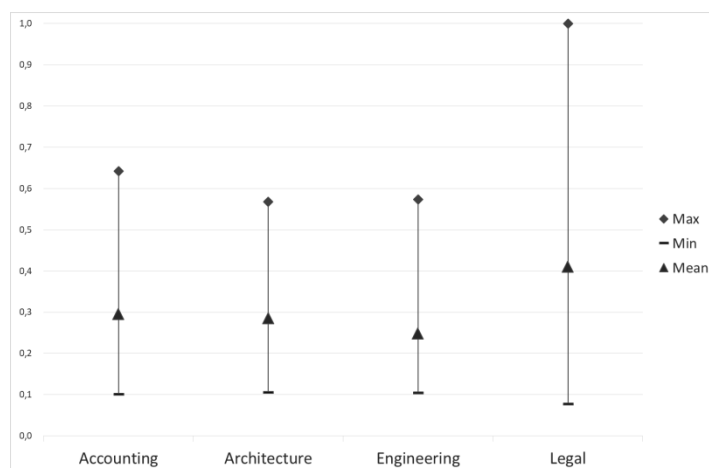
#### 4. Regulatory Heterogeneity in the EU Business Services Sector

The regulatory heterogeneity is one of the main barriers in the international trade in services. The different research (Marel and Shepherd 2013; Nordas 2016; Nordas and Rouzet 2017) show that regulatory heterogeneity have a significant negative effect on services trade flows. In general, heterogeneity of regulations is reflected in restrictions on foreign entities (establishment), movement of people (providers of services), barriers to competition, regulatory transparency and other discriminatory measures. All of them together are reflected in the Service Trade Restrictiveness Index (STRI) (OECD 2018 [online]). The STRI measures the restrictiveness of the national regulations based on the similarity of answers to the same measures between the country pairs. It is a composite index taking values between zero and one, where zero is representing an open market and one a market completely closed to foreign services providers. The STRI is a measure of Most-Favoured Nation (MFN) basis and does not take into account any specific concessions (Geloso Grosso et al., 2015).

The four types of business services are being in the scope of particular interest of the European Commission when it comes to strengthening of the European internal market. These are: accounting services, architecture, engineering and legal services. The general overview of regulatory heterogeneity in those four types of business services is presented below.

The STRI index shows that there are differences between those four business services regulatory frameworks between the EU Member States (Figure 1). Architecture and engineering services are quite similar in terms of the average restrictiveness (0,29 and 0,25 respectively) and dispersion (0,46 and 0,47). The accounting services are characterised by greater differences between the EU Member States, even though the average restrictiveness is on the similar level as in architecture and engineering. The greatest dispersion of restrictiveness appears in the legal services. The highest score there is one, what means that these countries are closed to foreign service providers (Luxembourg and Poland). On the other end is one country with nearly no restrictions (Latvia with the STRI index of 0,08). The average restrictiveness for legal services accounts for 0,41.

**Figure 1: STRI Indices - Accounting, Architecture, Engineering and Legal Services**



Source: own elaboration (2018) based on OECD STRI database [online] (2018)

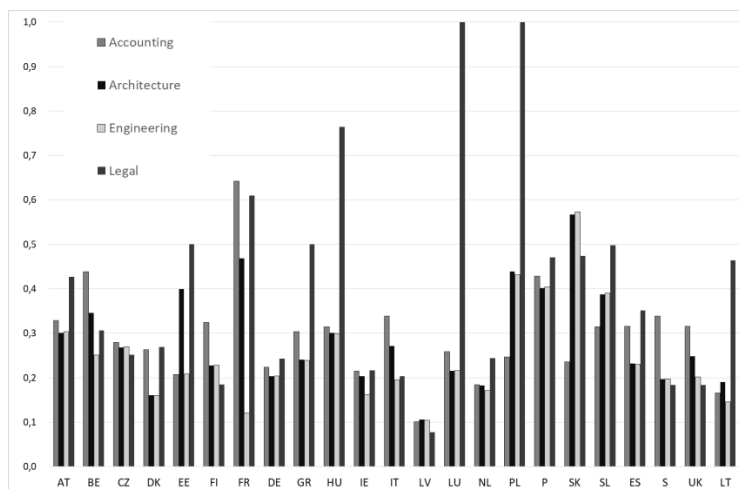
Accounting, architecture, engineering and legal services not only vary in terms of the average restrictiveness, but also as far as the dispersion of restrictiveness is concerned. However in all cases the restrictions derive from restrictions on movement of people and restrictions on foreign entry (Table 1). The highest average restrictiveness for movement of people characterise legal and architecture, whether for foreign entry in legal and accounting. The lowest level of restriction appears in barriers to competition.

**Table 1: Regulatory Heterogeneity in Business Services – Summary Statistics**

Measure	Accounting				Architecture			
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Restrictions on foreign entry	0.127	0.064	0.046	0.379	0.057	0.031	0.023	0.173
Restrictions on movement of people	0.123	0.045	0.031	0.215	0.163	0.097	0.048	0.318
Other discriminatory restrictions	0.010	0.007	0.000	0.022	0.014	0.010	0.000	0.045
Barriers to competition	0.008	0.004	0.000	0.016	0.011	0.006	0.000	0.020
Regulatory transparency	0.027	0.014	0.009	0.055	0.041	0.020	0.014	0.008
	Engineering				Legal			
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Restrictions on foreign entry	0.052	0.032	0.024	0.177	0.185	0.137	0.021	0.478
Restrictions on movement of people	0.134	0.091	0.032	0.322	0.164	0.084	0.028	0.347
Other discriminatory restrictions	0.031	0.009	0.000	0.028	0.014	0.012	0.000	0.045
Barriers to competition	0.009	0.004	0.000	0.019	0.018	0.013	0.000	0.047
Regulatory transparency	0.041	0.021	0.014	0.083	0.030	0.021	0.008	0.082

Source: own calculations (2018) based on OECD STRI database [online] (2018)

The STRI indices vary also between countries (Figure 2). The highest scores of 1 appears for Luxembourg and Poland in legal services, followed by France and Lithuania. Poland also has quite high level of restiveness in other business services in consideration, whether in Luxembourg these restiveness levels are on lower levels. Portugal is the country with the overall high restiveness level in all business services sectors concerned as STRI takes values over 0,4 for all of them, whether in France, Slovakia and Poland three business sectors have STRI scores much over 0,4. The less regulatory restrictive country is Latvia – neither of indices accounts for more than 0,1.

**Figure 2: STRI Indices in the EU Member States Concerning Business Services**

Source: own calculations (2018) based on OECD STRI database [online] (2018)

## 5. The EU Initiatives Regarding Business Services

As there is no room for the harmonization of regulatory framework, the European bodies has concentrated on the actions aiming at reduction of administrative barriers. In answer to the lack of the Service Directive results in significant changes in the regulatory, but mainly in the administrative environment for services, the European Commission has presented in 2015 a new strategy for internal market: *Upgrading the Single Market: more opportunities for people and business* (European Commission, 2015c). This strategy made a basis for a services package: *A services economy that works for Europeans* that consist of four proposals (European Commission [online], 2017c).

The strategic importance for the business services provision across the EU internal market has a proposal of the European Services e-card. In general, it is a simplified electronic procedure that will make it easier for providers of business services to complete the administrative formalities required to provide services abroad in another EU country. It shall replace administrative formalities in different languages, since the service provider follows a procedure in the home country language and with the home country administration. As results: the elimination of some administrative barriers and greater transparency of national requirements are expected. On the other hand the e-card is not aiming in harmonization, in general, of administration procedures across the EU, additionally leaving the possibility to the Member States to reject suggested application of procedures.

At the moment of proceeding the paper, the possibility of realization of the European Commission's proposed service package is weak, as there is a significant opposition from some protectionist EU Member States (France, Germany, Austria, Luxembourg, Belgium), as well as negative appraisal from the European Parliament commissions (ECON, JURI, EMPL) and the European advisory institutions (The European Economic and Social Committee, the European Committee of the Regions) (European Parliament [online], 2018). If the internal market and Consumer Protection (IMCO) committee of the European Parliament will also give a negative opinion it is a high probability that this proposal will not be further proceeded.

## 6. Conclusion

The business services market in the EU is highly fragmented and providers of these services face many barriers when they decide to carry on their activities in other Member States than the home country. These barriers are very diverse in nature ranging from natural through regulatory to administrative obstacles. Furthermore, even though the free provision of services across intra-EU borders should be guaranteed with the EU supranational enforcement regime, the EU's Member States still retain considerable discretion in business service regulations and supervision (Mustilli and Pelkmans, 2013). In result, the high level of regulatory heterogeneity between the EU Member States exists and, along with the administrative obstacles, hamper the possibilities for efficient functioning of the Single Market in business services sector. Finally, as the European law regarding services does not assume harmonisation of regulations, the efforts of the European institutions must be directed towards the administrative barriers. And it seems that there is a considerable scope to reduce administrative obstacles. But it is highly probable that the last proposal of the European Commission on the Service e-card will not be accepted and implemented and scope of administrative barriers will stay unchanged.

Therefore taking all the above into consideration, we can conclude that the internal market in the business services sector is not functioning efficiently. It is also highly possible that in the coming years the situation will not change dramatically leaving the possibility of fulfilling and strengthening the internal market in the business services sector uncertain.

## References

- [1] Doemeland, D. et al. (2016). *To reinvigorate Europe, we need more integration of services* [online]. [cit.2018-03-01]. Available at: <http://blogs.worldbank.org/europeandcentralasia/reinvigorate-europe-we-need-more-integration-services>.
- [2] European Commission. (2012). *Commission Staff Working Document on the result of the performance checks of the internal market for services (construction, business services and tourism)*. SWD(2012) 147 final. Brussels.
- [3] European Commission. (2015a). *A Single Market Strategy for Europe - Analysis and Evidence. Accompanying the document Upgrading the Single Market: more opportunities for people and business*. SWD(2015) 202 final. Brussels.
- [4] European Commission. (2015b). *Business services – Assessment of Barriers and their Economic Impact* [online]. [cit.2018-02-25]. Available at: <https://ec.europa.eu/docsroom/documents/13328>.
- [5] European Commission. (2015c). *Upgrading the Single Market: more opportunities for people and business*. COM (2015) 550 final. Brussels.
- [6] European Commission. (2017a). *Impact Assessment. Accompanying the document. Proposal for a Regulation of the European Parliament and of the Council introducing a European services e-card and related administrative facilities*, SWD(2016) 439 final. Brussels.
- [7] European Commission (2017b). *Administrative formalities and costs involved in accessing markets cross-border for provisions of accountancy, engineering and architecture services* Final Report. Brussels.



- [8] European Commission (2017c). *A services economy that works for Europeans* [online]. [cit.2018-02-25]. Available at: [http://ec.europa.eu/growth/content/services-economy-works-europeans-1\\_en](http://ec.europa.eu/growth/content/services-economy-works-europeans-1_en).
- [9] European Parliament (2018). *Legal and operational framework of the European services e-card* [online]. [cit.2018-03-02]. Available at: [http://www.europarl.europa.eu/oeil/popups/ficheprocedure.do?lang=&reference=2016/0402\(COD\)#tab-0](http://www.europarl.europa.eu/oeil/popups/ficheprocedure.do?lang=&reference=2016/0402(COD)#tab-0)
- [10] Eurostat. (2018a). *Glossary: Business services* [online]. [cit.2018-01-30]. Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Business\\_services](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Business_services).
- [11] Eurostat. (2018b). *Gross value added and income by A\*10 industry breakdowns [nama\_10\_a10]* [online]. [cit.2018-02-15]. Available at: <http://appsso.eurostat.ec.europa.eu>.
- [12] Geloso Grosso, M. et al. (2015). Services Trade Restrictiveness Index (STRI): Scoring and Weighting Methodology. *OECD Trade Policy Papers, No. 177*. Paris: OECD Publishing. doi: 10.1787/5js7n8wbtk9r-en.
- [13] Kox, H. and Rubalcaba, L. (2007). Analysing the Contribution of Business Services to European Economic Growth. *BEER paper no. 9*. Bruges: Bruges European Economic Research Papers.
- [14] Marel, E., & Shepherd, B. (2013). Services trade, regulation and regional integration: evidence from sectoral data. *The World Economy*, 36(11), pp. 1393-1405.
- [15] Mustilli, F. and Pelkmans J. (2013). Access Barriers to Services Markets. Mapping, tracing, understanding and measuring. *CEPS Special Report no. 77/June 2013*. Brussels: Centre for European Policy Studies.
- [16] Nordas, H. (2016). Services Trade Restrictiveness Index (STRI): The Trade Effect of Regulatory Differences”, *OECD Trade Policy Papers, No. 189*. Paris: OECD Publishing. doi: 10.1787/5jlz9z022plp-en.
- [17] Nordas, H. and Rouzet, D. (2017). The Impact of Services Trade Restrictiveness on Trade Flows. *World Economy*, vol. 4 issue 6. pp. 1155-1183.
- [18] OECD. (2018). *Services Trade Restrictiveness Index (STRI) Regulatory Database* [online]. [cit. 2018-02-15]. Available at: <http://www.oecd.org/tad/services-trade/services-trade-restrictiveness-index.htm>.
- [19] Stelkens, U., Weiss, W., & Mirschberger, M. (Eds.). (2012). *The implementation of the EU services directive: transposition, problems and strategies*. Springer Science & Business Media.
- [20] Stefaniak J. (2016). Services on the eve of the new Single Market strategy. In *14th International Scientific Conference “Economic Policy in the European Union Member Countries”*. Petrovice u Karviné: Silesian University in Opava, School of Business Administration in Karviná and VŠB-Technical University of Ostrava, Faculty of Economics, pp. 659-668.
- [21] Thelle, H.M. and Nielsen K.E. (2013). *Barriers to Productivity Growth in Business Services* [online]. [cit. 2018-02-05]. Available at: <http://produktivitetskommissionen.dk/media/139313/Business%20Services.pdf>.
- [22] WTO. (2018). *WTO Statistics Database* [online]. [cit. 2018-02-15]. Available at: [https://www.wto.org/english/res\\_e/statis\\_e/tradeserv\\_stat\\_e.htm](https://www.wto.org/english/res_e/statis_e/tradeserv_stat_e.htm)

## **Integration of the Eurasian Economic Union in Comparison to European Union Integration**

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### **Abstract**

*The aim of the article is to show the specificity of the integration of the Eurasian Economic Union (EEU) on the example of the integration of the European Union (EU). The EEU is a relatively young grouping that was established in 2015 by Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic and the Russian Federation. Its creators try to give the Eurasian integration process a different direction in contrast to the structures that were created in the post-Soviet space. The EU was founded in 1993, but the beginning of the foundation falls on 1957, in which the treaties establishing the European Economic Community were signed by six founding countries: France, Germany, Italy, Belgium, the Netherlands and Luxembourg. The article presents the functioning of the EEU, its objectives, assumptions and forecasts for the further process of merging national economies.*

**Keywords:** Eurasian Economic Union, Europe Union, integration

**JEL Classification:** F15, F45, F02

### **1. Introduction**

The international integration processes main goal is a sustainable development of the states, elicitation of investment cooperation and joint projects (Pollack, 2001). The emergence of a new international organization, companies, as well as general import and export have a great impact on the economies of the participating countries. Foreign direct investment (FDI) can significantly affect the economic growth of developing countries through technology, knowledge and skills transfer (Deichmann et al., 2003).

The Eurasian Economic Union is an international organization of regional economic integration, within which the free movement of goods, services, capital, and labour is ensured. The Treaty on the Eurasian Economic Union was signed on 29 May 2014 in Astana. From 1 January 2015, a new stage in the development of Eurasian economic integration began. The introduction of the state of full functioning of the EEU allows not only for the consolidation of a de facto deeper level of economic integration in the Eurasian space but also confirms the legitimacy of the strategy for the further development of integration. The EEU's internal market comprises an economic area in which the free movement of goods, persons, services, and capital is ensured.

At present, the customs boundaries between members have been abolished in the EEU. Unified norms of the Customs Code, customs tariff, foreign trade system, customs regulations and technical regulations have been introduced (*Eurasian Economic Union (2018) access: 27/01/2018*). Integration within the scope introduced by the EEU eliminated the existing

barriers between economies, which allows the expansion of enterprises in new markets. In connection with the above activities, trade turnover and capital flows between enterprises are expected to increase. One of the effects of the formation of an integration group is to strengthen the internationalization of enterprises that take advantage of the opportunities to expand into new markets due to the elimination of existing barriers between economies. We can, therefore, expect an increase in trade turnover and capital flows (Daszkiewicz, 2016).

### **1.1 The Basic Principles of the EEU and EU**

The Eurasian Economic Union is established for the significant improvement of modernization, cooperation, for national economies competitiveness but also for the creation of conditions to raising the population living standards. The integration of production, labour, financial resources and science.

EEU is an international organization of regional economic integration that ensures freedom of movement of goods, services, capital, and labour, as well as coordinated and unified policy in economic sectors. The member states of the Eurasian Economic Union are the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic and the Russian Federation. The creation of the Eurasian Economic Union was aimed at creating a bloc that would also be a partner and rival to the European Union and China (Michalik, 2015). It is worth noting, that the initiator of the creation of the Eurasian Union in 1994 was the President of Kazakhstan, N. Nazarbayev, who asked Russia to take over leadership in the economic union. It was only W. Putin, he became an appropriate partner for N. Nazarbayev to implement the integration project of the region (Gostomski and Michałowski, 2015)

The main objectives of the EEU are:

- creating conditions for the stable development of members economies in order to improve the living standards of their inhabitants;
- striving to create a single market for goods, services, capital and labour resources in the Union;
- comprehensive modernization, cooperation and increasing the competitiveness of national economies in the global economy.

The process of integration of European nations begun at the beginning of 20th century. In 1951, European countries began economic cooperation, the need arose to form a new grouping, a new common Europe. The EU was founded in 1957 by six countries: Belgium, France, Germany, Italy, Luxembourg and the Netherlands. In 2004 the EU took additional steps and the process of globalization has gained the new stage of development. Currently, the EU consists of 28 Member States. At the moment, the United Kingdom is still a member of the Union. There are several main goals that the EU pursued in the integration process:

- peacekeeping: EU values and the well-being of EU citizens, guaranteeing freedom, security and justice in an area without internal borders;
- economic integration :point of economic integration is the internal single market, established by the participating countries in order to create a unified economic territory that is not divided either by customs or trade barriers. At the heart of the single market are four such principles - free movement of goods, labour, services and capital. It is worth noting four important factors that are leading to these states: ensuring security, independence, welfare of society and the prestige of states. establishment of an economic and monetary union whose currency is the euro;
- promoting sustainable development based on sustainable economic growth and price stability, on a highly competitive market economy enabling full employment and social progress, and on environmental protection;

- political alliance: increasing economic, social and territorial cohesion and solidarity between Member States protection of rich cultural and linguistic diversity;
- social stability: combating social exclusion and discrimination, supporting scientific and technical progress.

## 2. Similarities and Differences of EEU and EU Integration Process

Comparison of integration processes leads to a comparison of the EU region and the region of the Eurasian Economic Union, taking into account historical time, the political and psychological context, approaches and models of integration in the context of the international environment. Integration processes reflect real economic and political trends in these unique regions of the world and create interaction between them. EU and EEU as continental international political institutions and the governing bodies of the EU and the EEU have their own powers as stipulated in the treaties and participate in the decision-making process and determine the main objectives of the Unions. It is worth noting that a political society and historical context is one of the most important roles in the integration process.

In 1994, the leader of the Republic of Kazakhstan, Nursultan Nazarbayev, proposed creating a truly working union of states in the Eurasian space, united by economic interrelations (Roberts and Moshes, 2016). In early 1995, the Republic of Kazakhstan, the Republic of Belarus and the Russian Federation signed the Agreement on the Customs Union aimed at removing obstacles to free economic interaction between economic entities of the parties, ensuring free trade and fair competition. In 1996, the leaders of the troika countries, together with the head of the Kyrgyz Republic, signed the Treaty on the deepening of integration in the economic and humanitarian spheres. On November 18, 2011, the Presidents of Russia, Kazakhstan, and Belarus signed the Declaration on Eurasian Economic Integration. By January 1, 2012, the legal framework of the Eurasian Economic Space (EES) - the market with 170 million consumers, free movement of goods, services, capital, and labour was formed (Tarr, 2016). The EES is based on concerted actions in key areas of economic regulation: macroeconomics, competition, industrial and agricultural subsidies, transport, energy, and natural monopoly tariffs. For the population and the business community, the gain from the EES was obvious. Entrepreneurs received equal access to the common market of countries, the ability to freely choose where to register their companies and do business, without undue restrictions, sell goods in any of the member states, and gain access to transport infrastructure. The creation and stage-by-stage debugging of the mechanisms of the work of the single market have become an important element of the plans of the countries participating in the Customs Union (CU) and the EES on the transition from the raw material economy to the innovative one. 2013 was one of the most significant periods in the improvement and development of Eurasian integration processes.

Integration of the European Union began in 1952, the European Union emerged as the European Coal and Steel Community (ECNU). It consisted of six founding countries: France, Germany, Italy, Belgium, the Netherlands and Luxembourg. The same countries were formed in 1958 by the European Economic Community (EEC) and the European Atomic Energy Community (EURATOM). But the European Community, as the association of the three communities calls itself since the 1960s, has always been calculated for the whole of Europe.

There are four stages in the expansion of the EU: expansion to the west in 1973 - accession by Great Britain, Ireland and Denmark, expansion to the south in 1981 and 1986 of accession - Greece, Spain and Portugal, expansion to the north in 1995 - accession by Sweden, Finland and Austria, extension to the east in 2004-2007 - the accession of Estonia, Latvia, Lithuania,

Poland, the Czech Republic, Slovakia, Hungary, Slovenia, Malta, Cyprus, as well as Bulgaria and Romania.

The Eurasian Economic Union began functioning on January 1, 2015. From October 2, Armenia became a full member, and on August 12, Kyrgyzstan joined. In October 2015, the presidents of the five Union countries approved the main directions of the economic development of the EEU until 2030 - an important document that determines the further coordination of national policies and ways to improve the competitiveness of the economies of the states of the Union. The effect of participation in the EEU by 2030 for member states is estimated to be up to 13% of additional GDP growth (Akhmetzaki and Mukhamediyev, 2017).

The EU is based on the principle of solidarity: the more economically developed member states help in the economic development of developing member states so that they are able to compete in the single European market (Jachtenfuchs, 2001). The EU has completed the process of monetary union and political union. Language factor: the method of translating accepted acts and all necessary documents into all languages of member states, but the process is not effective because it takes a very long period and a lot of financial resources for translations. There is an inter-parliamentary structure that represents the citizens of the EU. The main political institutions influencing the European integration process are NATO, the OSCE, the Council of Europe and transnational corporations. It is characterized by an independent common foreign policy and policy in the field of defence and security.

EEU uses a multi-rate integration method, counts on the economic readiness of member states for further integration. Like the EU, I have fulfilled all the necessary integration phases: a free trade area, a customs union, a common domestic market, an economic union. It has a high degree of dynamism because it takes into account the experience of the EU and other regional associations. Authors Mishalchenko and AV Izotov (Мишальченко and Изотов, 2014) believe that the role of a certain institutional "launching pad" for the start of important integration projects in Russia, Belarus and Kazakhstan was played mainly by international organizations: the CIS, EurAsEC, the Union State of Russia and Belarus (Anonymous, 2016). S.Yu. Glazyev notes that the Eurasian integration is based on the principle of treating the partner as an equal, respecting the voluntariness and mutual respect for the spiritual values and cultural identity of the united states with equal rights in making supranational decisions (Глазьев, 2014). There is a process of strengthening the sovereignty of the national member states on the basis of equality to the partner as an equal, the observance of voluntariness and mutual respect for the spiritual values and cultural identity of the unifying states with equal rights in making supranational decisions. The language factor is a common Russian language for all, which creates an effective bridge in the post-Soviet space, economic interaction, and is an important geopolitical factor. Decision-making procedure: implemented in each governing body on the basis of consensus, unlike the EU (Kirkham, 2016). "The Eurasian Economic Union represents a model of a supranational association that can become one of the poles of the modern world and at the same time play the role of an effective liaison between the Asia-Pacific Region and Europe".

Accordingly, to the integration process of EEU it shows a promising effect on economies of individual union members (Barakhvostov and Rusakovich, 2017). In comparison with January 2016 – February 2018 the economic characteristics have changed (Pridachuk and Tolstel, 2016). The GDP has increased from 4% to 15% (Table 1). The most significant increase of GDP was achieved by Russia 15.24% followed by Kyrgyzstan 14.28%, Kazakhstan 10.17%, Armenia 7.89% and Belarus 4.57%. Standard of people living also increased, what can be observed on the example GDP – per capita, which was 17.72% - Russia, 8.82% - Kyrgyzstan, 8.33% - Armenia, 5.66% -Kazakhstan and 4.49% - Belarus. In case of inflation rate, a

significant decrease was observed up to 72.72% in Russia and 66.07% in Armenia, next 53.08% and 46.66% in Kyrgyzstan and Belarus, respectively. Only in the case of Kazakhstan, the inflation rate increased by 35.84% due to the increasing prices of goods and services. The number of economically active people also increased, which results in the drop of the number of an unemployed rate in Belarus 28.57%, Kyrgyzstan 10% and Kazakhstan 3.92%. Slight increase was observed in Armenia 1.12% and a significant increase in Russia as much as 13.64%.

**Table 1: Characteristics of the EEU Member Countries (at 25.02.2018)**

Country	Population, mln	GDP, billion US dollars	GDP - per capita, thousands US dollars	Inflation rate, %	Unemployment rate, %
<b>Russia</b>	146.9	4000	27.9	4.2	5
<b>Belarus</b>	9.5	175.9	18.6	8	0.5
<b>Kazakhstan</b>	18.2	474.3	26.1	7.2	4.9
<b>Kyrgyzstan</b>	6.2	22.64	3.7	3.8	7.2
<b>Armenia</b>	3.0	27.21	9.1	1.9	18

Source: CIA World Factbook (2018)

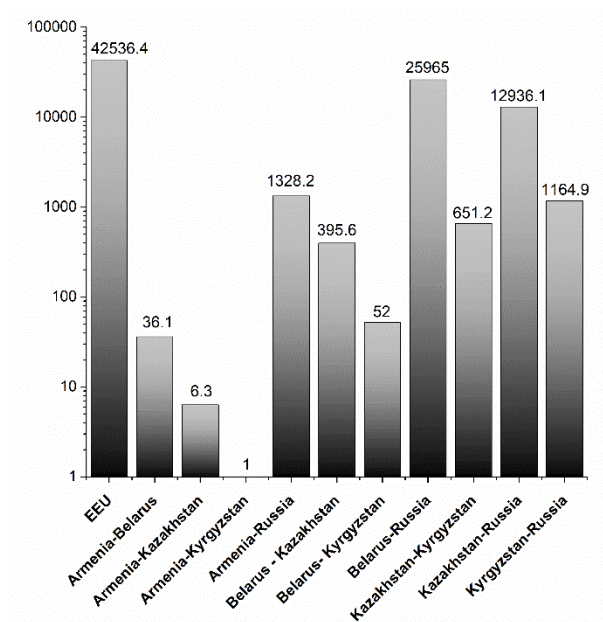
Comparison of characteristic economic indicators of the EEU Members to founding Members Countries of Europe Union they show significant differences in the wealth of these countries (Table 1). In case of GDP only Russia can compare with EU member countries, where the rest EEU Members have several times lower to EU Member countries. Also, the GDP – per capita and inflation rate are quite significant differences. However, the unemployment rate is lower for EEU than UE, which can be caused by several factors; immigration, the crisis in the euro area or leaving the Union by Great Britain (Scharpf, 2010). Moreover, should be taken into account that EEU is still very young Union which is created by countries which were historically dependent on Russia.

**Table 2: Characteristic of the EU Founding Members Countries (at 25.0.2.2018)**

Country	Population, mln	GDP, trillion US dollars	GDP - per capita, thousands US dollars	Inflation rate, %	Unemployment rate, %
<b>Belgium</b>	11.5	0.53	46.3	2.2	7.3
<b>France</b>	67.1	2.8	43.6	1.2	9.5
<b>Germany</b>	80.6	4.2	50.2	1.6	3.8
<b>Italy</b>	62.1	2.3	38	1.4	11.4
<b>Luxembourg</b>	0.6	0.06	109.1	1.2	17.4
<b>Netherlands</b>	17	0.9	53.6	1.3	5.1

Source: CIA World Factbook (2018)

**Figure 5: Represent the Total Value of Export Operations of the EEU Member States in Mutual Turnover for 2016 in mln USD**



Source: Own elaboration based on: Евразийскаяэкономическаякомиссия (2017)

According to the Eurasian Economic Commission, the volume of EEU transactions in 2016 compared to 2015 increased from 13.6 to 14.2%, which is a very positive phenomenon (Figure 1). The turnover in the EEU is USD 42,536.40 mln. Table 1 shows the volume of trade between countries, members of the EEU. The mutual turnover is as follows: Armenia - Belarus - 36.1 mln USD, Armenia - Kazakhstan - 6.3 mln USD, Armenia-Kyrgyzstan - 1 mln USD, Armenia - Russia - 1 328,20 mln USD, Belarus - Kazakhstan - 395 , USD 6 mln, Belarus - Kyrgyzstan - USD 52 mln, Belarus - Russia - USD 25,965 million, Kazakhstan - Kyrgyzstan - USD 651.2 mln, Kazakhstan Russia - USD 12 936.10 mln, Kyrgyzstan - Russia - PLN 14,890 mln USD.

### 3. Conclusion

The European and Eurasian region is truly unique in terms of historical experience and specifics. The EU has achieved the highest degree of integration development, its experience is a measure of the effectiveness of integration and also an example on which the EEU should rely. The legal base of the EEU implies reaching a high level of integration of this Union. To achieve a high level of integration, the EEU also presupposes the level of the "energy union". Also the transport network and infrastructure are the main elements for deepening integration. The Eurasian integration process presupposes the possibility to go beyond the post-Soviet space. Mutual understanding is necessary for EU and EEU integration projects. The EU should perceive the Eurasian integration process as an integration process of independent states without advancing the idea of Russian imperialism.

Vladimir Putin's many announcements about Eurasian integration have become part of the actual policy of states and are the most advanced integration structure that was created after 1991. Its creators try to give the Eurasian integration process a different direction in contrast to the structures that were created in the post-Soviet space. Russia's vast advantage makes it

difficult to guarantee the interests of other entities forming a new grouping, although the first years of the EEU operation confirmed that it was not possible to find a balance on economic and political issues because Russia was the beneficiary of integration. Another problem is the rapid construction of Eurasian institutions: within five years (up to 2015). They intend to achieve a result for which the EU has worked for several decades.

To some extent, the EEU is a project referring to the Soviet past, although it benefits from the experience of other integration groups. The EEU is a challenge for the enlargement processes that have been ongoing for over twenty years on the European continent, so far they have not been allowed.

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### **References**

- [1] Akhmetzaki, Y. Z. and Mukhamediyev, B. M. (2017). FDI DETERMINANTS IN THE EURASIAN ECONOMIC UNION COUNTRIES AND EURASIAN ECONOMIC INTEGRATION EFFECT ON FDI INFLOWS *Econ. Reg.* vol.3 iss.13 pp. 959–70
- [2] Barakhvostov, P., Rusakovich, A., (2017). Eastern partnership countries and eurasian integration in 2012~2015. *J. Econ. Integr.* vol.32, pp.845–882.
- [3] Daszkiewicz, N. and Suchkova, I. (2016). Internationalization of enterprises through networks in the area of the Eurasian Economic Union. Results from Kazakhstan *Przedsiębiorczość Zarządzanie* vol. XVII pp. 133–45
- [4] Deichmann, J. I., Eshghi, A., Haughton, D. M., Ayek, S. and Teebagy, N. C. (2003). Foreign direct investment in the Eurasian transition states *East. Econ.* vol. 41 iss. 1 pp. 5–34
- [5] Gostomski, E. and Michałowski, T. (2015). Euroazjatycka unia gospodarcza - próba ożywienia instytucjonalnej integracji gospodarczej na obszarze dawnego ZSRR *Zesz. Nauk. Uniw. Szczec. Stud. Pr. Wydz. Nauk Ekon. Zarządzania* iss. nr 41, T.1 *Gospodarka regionalna i międzynarodowa*. T. 1 pp. 81–92
- [6] Jachtenfuchs, M. (2001). The Governance Approach to European Integration *JCMS J. Common Mark. Stud.* vol. 39 iss. 2 pp. 245–64
- [7] Kirkham, K., 2016. The formation of the Eurasian Economic Union: How successful is the Russian regional hegemony? *J. Eurasian Stud.* vol. 7, pp. 111–128.
- [8] Michalik, A. (2015). Unia euroazjatycka – realną szansą dla integracji gospodarczej w regionie? *Stud. Ekon.* vol. 228 pp. 37–48
- [9] Pollack, M. A. (2001). International Relations Theory and European Integration *JCMS J. Common Mark. Stud.* vol. 39 iss. 2 pp. 221–44
- [10] Roberts, S.P., Moshes, A., 2016. The Eurasian Economic Union: a case of reproductive integration? *Post-Sov. Aff.* vol. 32, pp. 542–565.
- [11] Pridachuk, M. and Tolstel, M. (2016). International Economic Integration: Realities and Perspectives (the case of Eurasian Economic Union (EEU)). In *3rd International*



*Conference on European Integration: VŠB-TU Ostrava, Faculty of Economics*., pp. 790–9

- [12] Gazzola, P., Sepashvili, E., Lo Parco, A., (2016). EU Integration for a Successful Eastern Partnership: Trade and Sustainability. In 3rd International Conference on European Integration: VŠB-TU Ostrava, Faculty of Economics., pp. 245–254
- [13] CIA World Factbook (2018). *Statistics* [online]. [cit. 2018-02-25]: Available:<https://www.cia.gov/library/Publications/the-world-factbook/geos/am.html>
- [13] Scharpf, F. W. (2010). The asymmetry of European integration, or why the EU cannot be a “social market economy” *Socio-Econ. Rev.* vol. 8 iss. 2 pp. 211–50
- [15] Tarr, D.G., 2016. The Eurasian Economic Union of Russia, Belarus, Kazakhstan, Armenia, and the Kyrgyz Republic: Can It Succeed Where Its Predecessor Failed? *East. Eur. Econ.* vol. 54, pp. 1–22.
- [16] Глазьев, С. Ю. (2014). Евразийский союз — щит от санкций Евразийская Интеграция *Экономика Право Политика* vol. 2 iss. 16 pp. 5–10
- [17] Мишальченко, Ю. В. and Изотов, А. В. (2014), Основные факторы формирования отношения Европейского сою за к процессам евразийской интеграции vol. 2 iss. 16 pp. 26–31
- [18] Русская народная линия (2011). *Statistics* [online]. [cit.2011-10-04]. Available at: [http://ruskline.ru/news\\_rl/2011/10/04/novyj\\_integracionnyj\\_proekt\\_dlya\\_evrazii\\_buduwee\\_kotoroe\\_rozhdaetsya\\_segodnya](http://ruskline.ru/news_rl/2011/10/04/novyj_integracionnyj_proekt_dlya_evrazii_buduwee_kotoroe_rozhdaetsya_segodnya)
- [19] Foreign & Security Policy (2018). *Statistics* [online]. [cit.2019-02-25]. Available at: [https://europa.eu/european-union/topics/foreign-security-policy\\_en](https://europa.eu/european-union/topics/foreign-security-policy_en)

## Green Entrepreneurship in the European Integration Context

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### **Abstract**

*This paper examines the factors of development of green entrepreneurship in European Union through domestically developed standards and international frameworks, which arises because of the deepening of European integration, they also can bring profits for new enterprises and European economy. These tendencies develop towards globalization, justice and solidarity as a model of material extensive and sustainable development. This paper aim is to identify what is green entrepreneurship and to list the two groups of selected indicators which measure the shape and its unique character among selected countries as the important tool which may support European integration process. The Hellwig's pattern method was used as a main analysis method in this paper. The comparison of two types of indicators reveals a group of European countries where green entrepreneurship development is easier than in other member states of EU.*

**Keywords:** *European integration, green economy, green jobs*

**JEL Classification:** *F15, F64, J6, O13, Q54, Q56*

## **1. Introduction**

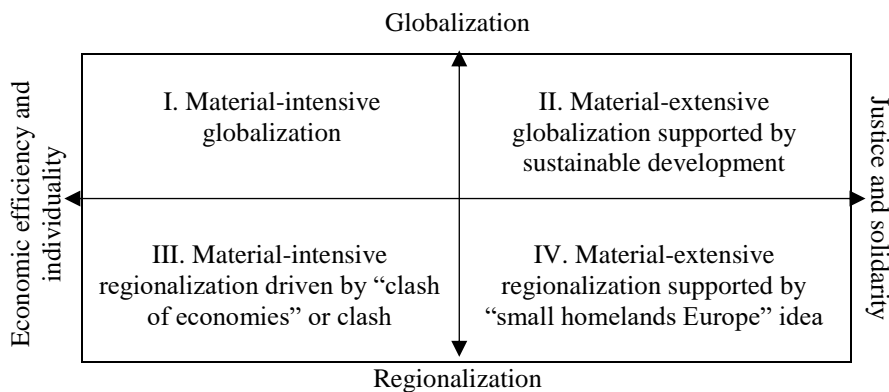
Nowadays European Union integration requires that environmental factors are taken into account in the formulation and implementation of all sectoral policies (Šotkovský, 2012). Integration also involves a cross-sectorial dimension since environmental problems such as climate change, biodiversity protection and water management are related to the multiple causes and sources of pollutant emissions and natural resource management across sectors (Liberatore, 1997). European integration is a process which depends on both external and internal factors relevant for moving towards sustainable development which European Union decided to achieve. The entrepreneurship can be appointed as the most important internal factor which influence directly labour market and consumption in the European Union. This entrepreneurship can be aimed on green development and measured by sustainability and durability indicators. Therefore, this paper attempts to discuss current notions and practices on integration in the EU, including their relationship with the concept of green and sustainable development in the entrepreneurship sphere. The aim of the paper is to examine the factors of development of green entrepreneurship in selected countries of European Union through domestically developed standards and international frameworks.

The first section of this paper presents idea shift towards material-extensive and sustainable model of development. Then green entrepreneurship and green job definitions are presented. Finally, the main problem is formulated as lack of sustainability indicators which may help to assess positive environment for green entrepreneurship in European integration context. Then the analysis of selected traditional and sustainability indicators is performed to draw a set of conclusions. Green entrepreneurship can form an integral part in the fight against youth unemployment due to the low entry-level requirements for young people in many sectors and their generally strong interest in innovative business solutions and sustainability considerations.

## 2. Green Development Ideas in European Integration Context

Europe's future depends, in wider context, on sphere of ideas concerning fundamental values and symbolic references. The problems of EU integration are related to a change in modern economy and labour market (Sulich and Rutkowska-Podołowska, 2017). Europeans' key concerns are about choosing the right set of values, one being social solidarity – the other, assuring prosperity to the most affluent groups of citizens. Therefore, the idea of support green entrepreneurship seems to be right way to achieve sustainable growth (Kasztelan, 2016). The shift from brown economy (model I or model III) to green economy is visible and is related to a shift to second model (II) proposed on Figure 1.

**Figure 1: EU Development Models**



Source: author's elaboration

It is possible to indicate some EU countries which may be assigned to the one of models presented on Figure 1. Moreover, the European Union has a set a goal to be a low-carbon economy and the key instrument for reducing greenhouse gas emissions (Bocora, 2012). The aim of this action is to motivate companies to reduce emissions and achieve minimum impact on social welfare and natural environment (de Bruin, 2016). A concomitant problem is the environmental sustainability of rapid economic growth: the location of waste facilities; the quality of water for drinking; planning in rural areas; and the high dependence on fossil fuels are all issues facing contemporary European society (Hon and Honová, 2012). Therefore, some of the European Union member states can be seen as leaders of the shift towards green economy, due to their natural capital.

Nowadays, natural capital is seen as a key element of socio-economic development (Bocora, 2012). Environmental resources and values are important factors in achieving not only green

development but also competitive advantage of small and medium-sized enterprises in the EU (Corbett and Montgomery, 2017). Moreover, small and medium-sized enterprises are the backbone of most of European countries economies, providing high levels of employment and contributing extensively to GDP growth (Sulikova et. al., 2015; Zhang and Walton 2017). Entrepreneurship results in wide range of innovation as well as sustained economic and social development (Kasztelan, 2016; Kryk 2016). Created by green entrepreneurs, green jobs provide a new source for starting and sustaining, green economy.

### **3. Green Entrepreneurship and Green Jobs Definitions**

Green entrepreneurship can be defined from two perspectives related to the output (products and services) as well as the process (or production) of an economic activity (ILO [online], 2017). Entrepreneurs can enter into an overtly 'green' business sector, providing green and environmentally friendly products and services. Alternately, green entrepreneurs can provide their products or services through an environmentally friendly process or with the help of clean technologies. Usually, green entrepreneurs consider both aspects in their activities, creating additional decent employment through the use of more environmentally friendly processes, while reducing the overall environmental impact as a result of people or companies using the final product or service (ILO [online], 2017).

Originating mainly from a level of technical innovation such as pollution reduction, clean production processes and resource efficiency, green entrepreneurship goes beyond the narrow technology-based aspects of doing business (Kryk, 2016). It can nurture a culture of lifecycle-based thinking and stimulate green innovation at the societal level. In doing so, green entrepreneurs create a shift in peoples' mindsets towards greener thinking and increased demand for green products and services, boosting the dual effect of employment and environmental gains (Schaper, 2005; Zhang and Walton, 2017).

Green jobs are places of employment that contribute to protect preserve or restore the natural environment (Rutkowska-Podołowska et al., 2016). According to United Nations Environment Program (UNEP) green jobs can be defined as work commenced in various sector of economy which contribute to ecosystem and biodiversity protection, but also is a guarantee of decent wage (UNEP, 2008; Kryk, 2016; Rutkowska-Podołowska and Sulich, 2016).

### **4. Problem Formulation and Methodology**

Environmental factors have to be taken into consideration in the formulation and implementation of the policies that regulate economic activities and other forms of social organization. Therefore, a new model of development can be achieved, a model that can be environmentally and socially sustained and durable (Corbett and Montgomery, 2017). It is not possible to indicate which of these business environment factors (Table 1) is more important, because both influence to each other. This is a result of the increasing interaction between the previously seen as separate spheres of the economic activity (Šotkovský, 2012). In turn, it is to be expected that environmental policy will be changed as a result of the growing interdependencies between different sectors of business and related to them policy agendas of environmental protection, economic growth and activities with major economic as well as environmental impacts, such as agriculture and transport (Rutkowska-Podołowska and Popławski, 2016). An important aspect to be considered is the fact that integration can result either in the strengthening of environmental considerations and priorities or in their dilution within other policies. Recently, governments have started paying close attention to how business can contribute to society through development of clean production, introducing green jobs and corporate social responsibility activities, particularly in its environmental aspect

(Adámek, 2016). The European Union in its strategy Europe 2020 has set a goal to achieve – sustainable growth as a part of low-carbon and green economy (Hon and Honová, 2012). Therefore, the aim of this paper is to examine the factors of development of green entrepreneurship in selected countries of European Union through domestically developed standards and international frameworks.

Although there are multiple of indicators which can describe green competitiveness of 20 selected from EU-28 countries (Kasztelan, 2016; Penalvo-Lopez, Carcel-Carrasco et al., 2017). They are completely different in case when companies are subject of comparison. Then only few indicators are essential for assessment of green entrepreneurship and its influence on labour market using Hellwig’s pattern model. Sustainability indicators were initially selected based on Eurostat data for small and medium companies. The reference years 2010-2016 were chosen due to data availability. Presented in Table 1 sustainability indicators attempt to meet three criteria: substantive, formal and statistical. Next step was to check if acknowledged indicators meet statistic criteria – the coefficient variation is greater than 10%. Therefore, 3 traditional indicators (with symbol  $x_i$ ) and 5 sustainable indicators (symbol  $y_i$ ) were listed in Table 1. Among the selected indicators only one ( $x_1$  - unemployment rate) was considered to be better if smaller, whereas the rest were regarded as larger-the better characteristics having positive impact on the measure. Table 1 also consists possible interpretation of traditional and sustainable indicators.

**Table 1: Two Groups of Economic Indicators of Green Entrepreneurship Development**

Indicator symbol	Traditional indicators	Indicator symbol	Sustainability indicators	Interpretation
$x_1$	Unemployment rate (% of total population)	$y_5$	Variability of skill levels required for jobs	Resilience of the job market
$x_2$	Employment rate (% of total population in age 20-64)	$y_5$	Number of diversity and vitality of local job base	
		$y_5$	Number of green jobs (EGSS)	Ability of the job market to be flexible in times of economic change
$x_3$	Number of births of enterprises (in thousands)	$y_5$	Number and variability in size of companies	
		$y_5$	Number and variability of industry types	

Source: Sulich and Rutkowska-Podołowska (2017) and Eurostat (2017)

To check of all selected countries the Hellwig’s pattern method based on traditional indicators measured by central statistical offices was suitable (Kasztelan, 2016), whereas to compare organisations in the EU and asses their impact on labour market the new set of sustainable indicators have to be taken into account (Eurostat [online], 2017). All steps of Hellwig’s pattern method were applied, to construct the systematic variables. Only the  $x_2$  indicator was transformed according to the formula:

$$x_{ij} = \frac{1}{x_{ij}} \tag{1}$$

The other features were standardized according to the formula:

$$z_{ij} = \frac{x_{ij} - \overline{x_{ij}}}{s_j}, \tag{2}$$

where  $i$  – is object number,  $j$  – feature number,  $s$  – is standard deviation. Such transformed features were subject of calculations of taxonomic distances between the investigated factors

values and reference model (Penalvo-Lopez, Carcel-Carrasco et al., 2017). This distance was calculated according to the formula:

$$d_i = \sum_{j=1}^m |z_{ij} - z_{0j}| \quad (3)$$

The calculations were performed also for the indicators marked as  $y_i$ . Obtained  $d_i$  values were used to compute Hellwig's synthetic measure of green development:

$$z_i = 1 - \frac{d_i}{d_0} \quad (4)$$

The  $z_i$  indicator assumes values within the range [0;1], whereas values closer to the model and are associated with high level of the investigated object. Obtained values  $z_i$  were arranged in linear manner in four groups:

$$1. \quad z_i \geq \bar{z} + s_z \quad (5)$$

$$2. \quad \bar{z} \leq z_i < \bar{z} + s_z \quad (6)$$

$$3. \quad \bar{z} - s_z \leq z_i < \bar{z} \quad (7)$$

$$4. \quad z_i < \bar{z} - s_z \quad (8)$$

Where:  $\bar{z}$  is arithmetic mean,  $s_z$  – standard deviation. Then values of  $z_i$  indicators were calculated for selected EU countries based on traditional and sustainable indicators. Stimulating green entrepreneurship in the European Union requires an approach combining interventions at different levels, which can be described by three main group factors Table 2.

**Table 2: Factors of Green Entrepreneurship for Selected 20 Member States of EU-28**

<b>Traditional indicators</b>	<b>Mean</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Standard deviation</b>	<b>Coefficient variation [%]</b>
Unemployment rate	6,4	2,6	17,3	3,02	47,2
Employment rate	33,2	3,2	77,0	17,91	54,0
Births of enterprises [thousands]	43051	3359	30551	41726,32	96,9
<b>Sustainability indicators</b>	<b>Mean</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Standard deviation</b>	<b>Coefficient variation [%]</b>
Variability of skill levels required for jobs	1,7	0,3	4,0	1,1	64,5
Diversity and vitality of local job base	2,9	0,6	10,6	2,8	97,5
Number of green jobs (EGSS)	2353,0	268,0	9410	2281,7	97,0
Variability in size of companies	27,0	6,6	68,1	17,8	65,9
Variability of industry types	18,7	8,0	38,0	8,0	42,7

Source: author's calculations

## 5. Problem Solution

Based on selected indicators: traditional and proposed by Eurostat sustainable development indicators selected 20 countries of EU-28 were assigned to four different groups which were created based on  $z_i$  - synthetic measure of green development conditions for green entrepreneurship. According to obtained results traditional indicators do not provide satisfactory answer in which country green entrepreneurship has a chance to thrive.

**Table 3: Classification of 19 EU Member States According to Value of the Synthetic Measure for Traditional and Sustainable Development Indicators**

Group number	Traditional indicators	Sustainable development indicators
I	Italy, Poland, France, Spain	Finland, Denmark, Sweden, Germany, Austria, Estonia, Latvia,
II	Romania, the Netherlands, Portugal, Belgium, Denmark,	the Netherlands, Belgium, France, Czech Republic, Slovakia, Slovenia,
III	Bulgaria, Hungary, Slovakia, Czech Republic, Latvia,	Poland, Hungary, Italy, Spain, Portugal,
IV	Finland, Sweden, Slovenia, Germany, Austria, Estonia	Romania, Bulgaria

Source: authors' calculations based on 2010-2016 data from Eurostat.

Presented in Table 3. Group countries are similar to results obtained by Kasztelan in area of selected traditional indicators (Kasztelan, 2016), however results obtained in column of sustainable development indicators are different and indicate that some countries create better conditions for green entrepreneurship. Some of them also have green competitive advantage like Finland or Denmark.

**Table 4: Groups of Green Entrepreneurship Factors**

Factors Group	Description
<b>Culture</b>	Nurturing a green business culture and raising awareness amongst entrepreneurs about opportunities arising from environmentally friendly business models.
<b>Policy</b>	Creating an enabling environment which promotes and encourages green investments and entrepreneurship.
<b>Funding</b>	Supporting new and emerging entrepreneurs through the provision of business development services and other financial and technical support schemes.

Source: ILO (2017)

Presented in Table 1 sustainable development indicators can be appointed as related to the culture factors of green entrepreneurship supported by each country individual green competitiveness (Table 4). Cultural factors seem to be more important than other two groups of support offered in countries grouped in first group, whereas traditional indicators can be related to policy and founding factors group. Analysed selected factors presents 20 selected countries which may be ranked due to their leadership role in green entrepreneurship and leaders of the European integration - group I of sustainable development indicators (Table 3).

## 6. Conclusion

Green entrepreneurship can provide new employment opportunities to workers who are set free during the restructuring towards a greener economic model. Implementation of this model brings four facts which have to be emphasized as follows: green entrepreneurs are indispensable for employment creation and GDP growth; SMEs are highly interlinked within value chains, creating significant spill-over effects; green entrepreneurship can best be supported through interventions at various levels, using a broad choice of instruments; finally the youth can be well targeted, since entry requirements are low and willingness for innovation is high. Moreover, sustainable development indicators presents involvement of some member states in European integration expressed in cohesion in environmental policy and reflect better shift to green model of EU development. Finally the relations between so described areas of European integration indicates that further research in this topic is required.

European integration is still in its beginning, hence even now the political elites are strongly dependent on their national voters, who decide their position. Moreover, one can forecast that this situation will not soon change, as politicians, very much like voters, will perceive integration through the perspective on national benefit. It was aim of this paper to spot some countries as examples of cooperative fronts among European entrepreneurs in relation to Europe's future. One of the most important factors conditioning the future of the EU is its economic competitiveness coming from green entrepreneurship. Green businesses are gaining popularity as more opportunities arise for eco-entrepreneurs to invest in which will be a topic for further research as well.

## References

- [1] Adámek, P. (2016). Consequences of Corporate Social Responsibility Approach in Voluntary European and Global “Responsible” Initiatives. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 19-27.
- [2] Bocora, J. (2012). How to Achieve a Common European Energy Policy? In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 19-29.
- [3] Corbett, J., Montgomery, A.W. (2017). Environmental Entrepreneurship and Interorganizational Arrangements: A Model of Social-benefit Market Creation. *Strategic Entrepreneurship Journal*, vol. 11 iss. 4, pp. 422-440.
- [4] De Bruin, A. (2016). Towards a framework for understanding transitional green entrepreneurship, *Small Enterprise Research*, vol. 23, iss. 1, pp. 10-21.
- [5] Eurostat (2017). *Sustainable indicators* [online]. [cit.2017-12-12]. Available at: <http://ec.europa.eu/eurostat/web/sdi>
- [6] Hon, M., Honová, I. (2012). EU Energy and Environmental Policies Threatening Competitiveness of the EU. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 86-93.
- [7] ILO (2017). Green entrepreneurship: Creating green jobs through sustainable enterprise development [online]. [cit.2017-12-10]. Available at: [http://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/---emp\\_ent/documents/publication/wcms\\_250688.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_250688.pdf)



- [8] Kasztelan, A. (2016). Green Competitiveness of the EU Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp.415-424.
- [9] Kryk, B. (2016). Green jobs – good practices. In Burchard-Dziubińska M. (ed.). *Towards green economy*. Wydawnictwo Uniwersytetu Łódzkiego, Łódź pp. 107-124.
- [10] Liberatore, A. (1997). The integration of sustainable development objectives into EU policy making. Barriers and prospects. In Baker, S. Kousis, M, Richardson, D., Young, S. (eds.). *The Politics of sustainable development: Theory, Policy and Practice Within the European Union*. Psychology Press, London pp. 107-111.
- [11] Penalvo-Lopez, E., Carcel-Carrasco J., et al. (2017). A Methodology for Analysing Sustainability in Energy Scenarios. *Sustainability*, vol 9, iss. 9, article number 1590.
- [12] Rutkowska-Podołowska M., Popławski Ł. (2016). *Rolnictwo a zielone miejsca pracy*. Studia i Prace Wydziału Nauk Ekonomicznych i Zarządzania (Uniwersytet Szczeciński). 2016, nr 44, pp. 201-208.
- [13] Rutkowska-Podołowska, M., Sulich, A. (2016). Zielone miejsca pracy w gospodarce. In Howaniec H., Malara Z., Wyród-Wróbel J. (eds.). *Poprawa Efektywności w przedsiębiorstwie – wybrane aspekty. Monografia*. Wydawnictwo Naukowe Akademii Techniczno-Humanistycznej, Bielsko Biała pp. 165-176.
- [14] Rutkowska-Podołowska, M., Sulich, A., Szczygieł, N., (2016a) Green Jobs In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 822-829
- [15] Schaper, M. (2005). Understanding the green entrepreneur. In Schaper, M. (ed.), *Making ecopreneurs: Developing sustainable entrepreneurship*. Hampshire, UK: Ashgate, pp. 3-12.
- [16] Šotkovský, I. (2012). Change of the Population Size and the Ageing Process of the EU Countries after 1990 In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp.315-322.
- [17] Sulich, A., Rutkowska-Podołowska, M. (2017). Green jobs and changes in modern economy on the labour market. In Borowiecki, R. and Kaczmarek J., (eds.). *The Propensity to changes in the competitive and innovative economic environment. Processes -Structures – Concepts*. Foundation of the Cracow University of Economics, Kraków, pp. 87-94.
- [18] Sulikova, V., Djukic, M., Gazda, V., Kulhanek L. (2015) *Asymmetric Impact of Public Debt on Economic Growth in Selected EU Countries*, *Ekonomicky Casopis*, vol. 63, issue 9, pp.944-958
- [19] UNEP (2017). Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World [online]. [cit.2017-12-11]. Available at: <http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1057&context=intl>
- [20] Zhang, J.A., Walton, S. (2017). Eco-innovation and business performance: the moderating effects of environmental orientation and resource commitment in green-oriented SMEs. *R&D Management*, vol. 47, iss. 5 - special issue, pp. E26-E39.

## **The Flexibility of Institutional Environment and Economic Performance in EU Countries**

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### **Abstract**

*This paper examines the impact of institutional flexibility and institutional quality and their interactions on economic performance. Studies show that while institutional quality reduces transaction market costs, this leads to an immediate but short-term growth in economic growth. On the contrary, the increase in institutional flexibility leads to a steady growth. This paper suggests that past institutional studies place too much emphasis on the stability of institutional settings. The aim of the research is to provide new insights on the issue of institutional flexibility and quality in terms of economic performance. The analytical part of research focuses on the characteristics of the EU states in the period 1996-2016. The results show significant effects of institutional flexibility and quality measures on economic performance.*

**Keywords:** *economic performance, European Union, institutional environment*

**JEL Classification:** *E02, O10, O43*

### **1. Introduction**

Institutions and their impact on the economy have been a subject of economic studies already many years. There are many studies currently underway to help understand the mechanism of economic growth. Determinants of economic growth that reflect the quality of institutions have long been important indicators. Institutional flexibility has only recently come to attention. Earlier studies had a simple assumption regarding the stability of the institutional environment. These studies (such as Acemoglu et al., 2001) point to a positive link between economic growth and institutional stability. However, later studies (such as Davis, 2010) show that while institutional quality reduces transaction costs on the market, it leads to an immediate but short-term growth in economic growth. On the contrary, the increase in institutional flexibility leads to a steady growth. Exploring these effects is particularly important for the continuation of European integration, as the European Commission (2012) stresses the need to continued reforms that can be postponed due to the fear of a negative effect caused by institutional instability.

This paper suggests that some past institutional studies place too much emphasis on the quality of institutional settings. Research shows the significance of both of these characteristics (both quality and flexibility (instability)). The goal of this paper is to investigate the impact of selected institutional indexes (in terms of both quality and flexibility of institutional environment) and their interactions on economic growth in 28 member states of the European Union. The analytical part of research focuses on the institutional characteristics of the EU

states in the period 1996-2016. More precisely, six institutional indexes from World Government Indexes is taken into account. To determine the impact of these institutional indexes on economic growth a panel data analysis, based on a growth model, is provided for the examined period. The analysis in this paper shows both influences of institutional quality and flexibility on economic growth.

The structure of the paper is as follows. After a short introduction, the second section provides an overview of the theoretical relations between institutional quality, institutional flexibility, and economic growth. The second part of the section is devoted to a description of methodological issues. The empirical results of the model derived in the second section are consequently presented (in the third section). The last section summarizes main findings.

## **2. Theoretical Background and Methodology**

Institutions and their impact on the economy were investigated in many studies. Many of them were inspired by the insights of Douglas North (1991). These insights were later applied in a variety of econometric studies that confirmed the importance of the institutional environment as an important determinant of economic growth (e.g. Barro 1996; Knack and Keefer, 1995). Many of mentioned studies were focused on positive impacts of institutional quality to economic growth. However, the crucial role of institutions was found not only regards the economic growth. Some studies were also focused on the relationship between quality of the institutional environment and innovational performance (Tebaldi and Elmslie, 2013).

On the other hand, there are not so many studies focused on institutional flexibility. One of the most important research in this field is study by Lewis S. Davis (2010), who developed a theoretical model of institutional flexibility and economic performance. According to this work, while institutional quality plays an important role in the short run, institutional flexibility plays an irreplaceable role, especially in long-run economic performance. It can be stated that notion of efficient institutions is based on circumstances because as conditions change over time, 'what are good institutional forms at one stage are no longer appropriate at others' (Storper, 2005). The institutional environment was considered as important determinant also for economic resilience (Melecký and Staničková, 2015) and in connection with technological resilience (Balland, Rigby and Boschma, 2015). Last mentioned study has proven the innovative capability of US cities and shows that cities with greater institutional flexibility are also less likely to fall into so-called technological crises (their results shows that an increase in the institutional flexibility of cities significantly lowers the risk of entering a technological crisis).

### ***2.1 Theoretical Channel Between Institutional Flexibility and Economic Growth***

One of the main criticism focused on the research of the institutional environment and its impact on economic growth is the lack of a dynamic perspective. Many studies highlight the stability of institutions as the only aspect of the institutional environment (for example, Acemoglu et al.; 2001). Still, in the literature, a deviation from a static point of view can be found. For example, Abramovitz (1986) notes the country's ability to adopt new foreign technologies, while noting that while country institutions can be well designed, they may not have the ability to adapt to new requirements. The ability of the policy and the legal system to respond to the changing institutional demands of an evolving economy thus appears to be a longer-term aspect of the institutional environment than the very quality of economic policy or trade laws.

The positive effect of institutional flexibility is explained by two basic mechanisms. The first is the idea that countries need to endure a period of change when implementing reforms to improve institutional quality. This necessarily leads to a temporary increase in institutional instability. This idea is in line with Hayek's (Hayek, 1973) explanation of institution-building, in which there is a need for experimentation with institutional settings to achieve growth. Without the trial-and-error process, political decision-makers often cannot get information on how concrete reforms work. The second idea is Olson mechanism (Olson, 1982). This explains negative side effect of excessive institutional stability, with the anticipated increase in influential groups that, by tracking their own interests, contribute to reducing the rate of economic growth. Conversely, achieving the necessary degree of institutional instability (or flexibility) weakens the influence of interest groups (and their rent-seeking activities).

## **2.2 Methods and Data**

In this section, the baseline model and dataset used to evaluate the impact of selected institutions measures is described. Following similar studies (e.g. Berggren et al., 2015) a panel regression analysis is used to answer the research question: what are the effects of institutional flexibility and quality on growth. In order to determine the impact of institutional flexibility and quality on economic growth a panel data method especially regression models with time- and country-fixed effects are employed. The dependent variable is the annual growth rate of GDP per capita in purchasing power standards. However, here is the question about correct specification of growth regression especially the question about what may be control variables in it. Unfortunately, there is no complete agreement on what control variables to use in such growth models (there are many studies about control variables in growth regressions, see, e.g. Barro (1996)). Similarly to mentioned studies, a standard set of control variables is included (i.e. initial GDP, government expenditures as a share of GDP, gross fixed capital formation as a share of GDP (GFCF) and labour force growth (measured as annual growth of economic activity rate). All four control variables were acquired from Eurostat (Eurostat, 2018)). Although the interdependence of variables is probably much more complex, economic growth is perceived as a result of activities, while other variables in the study are perceived as driving forces.

Table 1 gives variable description and sources for the data used in regression analysis (except mentioned control variables) so that variables measuring institutional quality and instability are described there. In order to use suitable institutional quality and institutional flexibility measures, World Government Indices (WGI) is employed (Kaufman et al., 2010). The Worldwide Governance Indicators (WGI) is a research data set that summarizes views on the quality of governance provided by a large number of respondents from businesses, citizens and expert surveys in industrialized and developing countries. This data set is suitable for this analysis because it is based on hundreds of surveys. The mentioned dataset consists of six different indexes (see Table 1) which covers six different institutional areas.

**Table 1: Description and Sources of Variables Based on WGI**

Variable	Source	Description
VA	WGI	Voice and Accountability
PLST	WGI	Political Stability and Absence of Violence/Terrorism
GOEF	WGI	Government Effectiveness
RQ	WGI	Regulatory Quality
RL	WGI	Rule of Law
CC	WGI	Control of Corruption
GovernanceCV	WGI, own	Coefficient of variation across periods of PFA scores
GovernanceQ	WGI, own	Average of PFA scores across a five-year periods
GovernanceTR	WGI, own	Trend of PFA scores across a five-year periods
CV_	-	Coefficient of variation across periods of WGI indexes
avg_	-	Averages of given WGI indexes across periods

Source: Own construction

This data are available for 28 member states of the European Union within period 1996 – 2016 (Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom).

The choice of the period was determined by the availability of data for the given period. Indicators are used both separately and also in aggregated form. In order to get not arbitrary aggregation principal factor analysis (PFA) is performed. This approach could be difficult regards to interpretation of calculated factor, but in our case, PFA gets only one easily interpretable factor. This factor (or main component) is correlated with all six WGI indexes and cover approximately 80 % of dataset variation. For purpose of this paper is this factor named “Governance quality”. To construct measures of quality, five averages for five-year periods 1996-2000, 2000-2004, 2004-2008, 2008-2012, 2012-2016 was calculated for each country. Institutional flexibility is measured by the coefficient of variability calculated for given country within the same five five-year periods. Each of this variable (except initial GDP) is calculated as average for each a five-year period). Initial GDP corresponds to the first of each five-year period.

In the following, the regression analysis is employed as in the equations below, where:

- X stands for control variables,
- Q stands for a set of measures of quality of institutions calculated as average,
- $CV_q$  capturing institutional instability as the coefficient of variation of Q across each five-year periods,
- GovernanceCV is the coefficient of variation across a five-year period of PFA score,
- GovernanceQ stands for an average of PFA score across a five-year periods,
- GovernanceTR is a trend based on “Governance quality” factor (described below),
- $\varepsilon$  stands for error term.

Then first regression equation is as follows:

$$gGDP = \alpha + \beta X + \gamma CV_Q + \delta Q + \varepsilon \quad (1)$$

When interpreting the effects of institutional flexibility, interactions of institutional quality and flexibility have been considered as important aspects (e.g. Brambor, Clark and Golder, 2006). In order to concern this approach, interactions between quality and flexibility of each WGI index is included in regression analysis. Another often-neglected aspect is an evaluation of different institutional trends. That is why the trend of factor “Governance level” is calculated based on the beta coefficient of regression line constructed for each five-year period from PFA scores. This trend evaluation is categorical value and separate positive trend (trend=1, above the 75<sup>th</sup> percentile of beta coefficients); negative trend (trend=-1, below the 25<sup>th</sup> percentile of beta coefficients) or roughly constant trend (trend=0, between first and third quartile).

The second and third regression equations are as follows:

$$gGDP = \alpha + \beta X + \gamma [CV]_Q + \delta Q + \text{interactions of CV and Q} + \varepsilon \quad (2)$$

$$gGDP = \alpha + \beta X + \delta \text{GovernanceCV} + \gamma \text{GovernanceQ} + \varphi \text{GovernanceTR} + \varepsilon \quad (3)$$

### 3. Empirical Results

Using the data and concept of regression models described above, series of panel regression with fixed effect was performed. The empirical results of panel regression analysis for the baseline model (1) and its extensions (2) and model based on aggregated data (3) are reported in Table 2. The signs of control variables are as expected but not all of them are significant. GDP is strongly significant. This result illustrates the strong convergence effects that could be expected in relatively similar countries. Government expenditures are also negatively and significantly related to economic growth. Conversely, Gross Fixed Capital Formation is insignificant. Regarding the institutional variables, only in the case of the second model (2) two of the institutional flexibility measures (CV\_RQ, CV\_RL) have statistically significant impact on economic growth, however, with different signs. While variability of the Regulatory Quality (which reflects the ability of the government to develop desired policies permitting private sector development) has a positive effect, variability of the Rule of Law (which reflects perceptions of the extent to which agents have confidence in the rules of society) is negative. The first finding is in compliance with assumptions about the Olson mechanism and Hayek notion. The latter finding is similar to other studies, but there is a question about the explanation of the negative sign.

Another strange result, in contrast with expectations, was found in the case of the first model (1), where one of the institutional quality measures (avg\_RQ) has negative effect on economic growth (but this result is not so strange in comparison with similar findings (e.g. Berggren et al., 2015)). The results of the model based on aggregated data (3) approve the importance of neither flexibility nor institutional quality based on aggregated PFA scores (trend as well as). The second column of Table 2 includes also the estimates of interactions between variability and quality of given WGI indexes. The results show that only two pairwise interactions, CV\_RQ x avg\_RQ and CV\_RL x avg\_RL, significantly explain economic growth. The second one refers to the following relation: the higher the “Rule of Law” is conditioned by institutional flexibility, the greater the effect it has on economic growth. It is, however, the opposite, when the effect of quality is unconditional by instability. This result shows that the quality of the institution environment measured by Rule of Law WGI index does not affect growth when it stands separately. Effect on economic growth can only be seen in interaction, which is entirely in line with similar studies. In addition, it is evidence for the effect of the so-called Olson

mechanism or the Hayek mechanism. Opposite result is in the case of the first pairwise interaction (CV\_RQ x avg\_RQ) - effect is negative.

**Table 2: Regression Results – Growth Effects of Institutional Quality and Flexibility, Dependent Variable: gGDP**

Effect of	(1)	(2)	(3)
<b>const</b>	0,944*** (0,27)	1,004*** (0,277)	0,681*** (0,251)
<b>CV_VA</b>	-0,693** (0,286)	-0,716 (3,985)	-
<b>CV_PLST</b>	0,03 (0,103)	-1,268 (1,058)	-
<b>CV_GOEF</b>	0,137 (0,167)	0,370 (1,460)	-
<b>CV_RQ</b>	-0,051 (0,176)	3,153** (1,525)	-
<b>CV_RL</b>	0,093 (0,245)	-5,307** (2,334)	-
<b>CV_CC</b>	0,031 (0,167)	0,89 (1,135)	-
<b>avg_VA</b>	0,026 (0,029)	0,026 (0,039)	-
<b>avg_PLST</b>	-0,002 (0,011)	-0,003 (0,013)	-
<b>avg_GOEF</b>	-0,02 (0,015)	-0,011 (0,017)	-
<b>avg_RQ</b>	-0,05** (0,019)	-0,039* (0,02)	-
<b>avg_RL</b>	-0,016 (0,023)	-0,039 (0,025)	-
<b>avg_CC</b>	0,019 (0,001)	0,024 (0,017)	-
<b>Initial GDP per capita</b>	-2,730e-6*** (4,113e-7)	-2,765e-6*** (4,09e-7)	-3,286-6*** (3,26e-7)
<b>Government expenditures</b>	-0,004*** (0,001)	-0,004*** (0,001)	-0,003*** (0,001)
<b>GFCF</b>	0,001 (0,001)	0,001 (0,001)	0,001 (0,001)
<b>Labour force grow.</b>	0,502** (0,235)	0,461* (0,239)	0,596** (0,244)
<b>GovernanceCV</b>	-	-	-0,022 (0,085)
<b>GovernanceQ</b>	-	-	-0,01 (0,009)
<b>GovernanceTR</b>	-	-	0,001 (0,002)
<b>CV_VA x avg_VA</b>	-	0,019 (0,85)	-
<b>CV_PLST x avg_PLST</b>	-	0,301 (0,244)	-
<b>CV_GOEF x avg_GOEF</b>	-	-0,035 (0,314)	-
<b>CV_RQ x avg_RQ</b>	-	-0,718** (0,346)	-
<b>CV_RL x avg_RL</b>	-	1,216** (0,523)	-
<b>CV_CC x avg_CC</b>	-	-0,179 (0,265)	-
<b>Hausmann test</b>	77,05***	106,22***	76,49***
<b>Observations</b>	131	131	131
<b>Within R<sup>2</sup></b>	0,77	0,80	0,72
<b>P-value (F)</b>	8,3e-20	4,53e-19	8,77e-21

Source: Own calculations using GRETL software

#### 4. Conclusion

In this paper, we were interested in the question whether the institutional flexibility and quality of the European countries could be related to the economic growth in the member states. The empirical results based on a panel of 28 European countries observed across five five-year periods between 1996 and 2016 suggest significant effect of interaction of institutional quality and flexibility on growth (in the case of Regulatory Quality and Rule of Law indexes – CV\_RQ x avg\_RQ and CV\_RL x avg\_RL). However, in contrast with the theory, first mentioned relationship is negatively related with growth. The same significant result (only with opposite sign) was found in the case of estimating separate flexibility effect (i.e. coefficients of variability of Regulatory Quality (CV\_RQ) and Rule of Law (CV\_RL) indexes).

With regard to indicators reflecting only institutional quality, except for one case, all estimates were insignificant. The only case concerns the Regulatory Quality Index (avg\_RQ), which, however, also in contrast with the theory, shows negative dependence with growth. On the other hand, this surprising result is in line with the results of other study (Berggren et al, 2015), where the quality of legal-administrative institutions is negatively associated with growth. Results also show the interdependence of institutional flexibility and quality (especially in the case of interaction CV\_RL x avg\_RL this is in line with the Olsonian idea that stable institutions can simplify influence of interest groups on the political process and create policies that are harmful to long-term growth).

Without overstating the causal relationship between flexibility and economic growth (because this issue could be answered only with longer time series), two results deserve to be emphasized. First, at least in the case of the CV\_RL x avg\_RL beneficial association between growth and high institutional quality is not weakened by flexibility, but instead seems to be growth-promoting. In other words, there is no clear evidence that the short-term instability created by reforms impedes the positive effects of these reforms. This is very important from the point of view of European integration because it seems irrelevant to expect negative effects in the case of rapid reform compared to the slow implementation of reforms. Second, while the results should be particularly carefully interpreted, at least part of them are compatible with the idea that institutional instability can mitigate negative growth effects of Olsonian sclerosis and institutional adjustments in the spirit of Hayek could have a growth-enhancing effect. European data, therefore, indicate that it seems that the simplifying view that instability of institutions is always detrimental to growth has not been the case for European Union over the past two decades. In upcoming studies, it could be interesting to re-estimate the growth equation using different data sets of institutional quality to find out how the influence of different institutional measures varies and solve the causality issue.

#### References

- [1] Abramovitz, Moses. (1986). Catching up, forging ahead, and falling behind. *Journal of Economic History* vol. 46, iss 2, pp. 386–406.
- [2] Acemoglu, D, Robinson, J. A. (2001). A theory of political transitions. *American Economic Review*, vol. 91, iss. 4, pp. 938–963.
- [3] Berggren, N., Bergh, A. and Bjørnskov, C. (2015). What matters for growth in Europe? Institutions versus policies, quality versus instability. *Journal of Economic Policy Reform*, vol. 18, iss. 1, pp. 69–88.



- [4] Balland, P.-A., Rigby, D. and Boschma, R. (2015). The technological resilience of US cities. *Cambridge Journal of Regions, Economy and Society*, vol. 8, iss. 2, pp. 167–184.
- [5] Barro R.J. (1996). Determinants of economic growth: A cross-country empirical study, *Working paper no. 5698*. Cambridge: NBER Working Paper Series.
- [6] Brambor, T., W. Clark and M. Golder. (2006). Understanding Interaction Models: Improving Empirical Analyses. *Political Analysis*, vol. 14, iss. 1, pp. 63–82.
- [7] Davis, L. S. (2010). Institutional flexibility and economic growth. *Journal of Comparative Economics*, vol. 38, pp. 306–320.
- [8] European Commission. (2018). *Annual Growth Survey 2018*. [online]. [cit.2018-02-22]. Available at: [https://ec.europa.eu/info/sites/info/files/2017-comm-690\\_en\\_0.pdf](https://ec.europa.eu/info/sites/info/files/2017-comm-690_en_0.pdf).
- [9] EUROSTAT. (2018). *Database* [Online]. [cit.2018-02-22]. Available: <http://ec.europa.eu/eurostat/data/database>.
- [10] Hayek, F. A. (1973). *Law, Legislation and Liberty: Rules and Order*. Chicago: University of Chicago Press.
- [11] Kaufmann D., Kraay A. and Mastruzzi M. (2010). *The Worldwide Governance Indicators: A Summary of Methodology, Data and Analytical Issues*. [online]. [cit.2018-02-22]. Available at: <http://info.worldbank.org/governance/wgi/#home>.
- [12] Knack S. and Keefer P. (1995). Institutions and economic performance: Cross-country tests using alternative institutional indicators. *Economics and Politics*, vol. 7, iss. 3.
- [13] North D. (1991). Institutions. *The Journal of Economic Perspectives*, vol. 5, iss. 1.
- [14] Olson, M. (1982). *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. New Haven: Yale University Press.
- [15] Melecký, L. and Staničková, M. (2015). Assessment of EU Regional Resilience Using Composite Index. In Proceedings of 13th International Scientific Conference Economic Policy in the European Union Member Countries (pp. 382-395).
- [16] Storper M. (2005). Society, community and economic development. *Studies in Comparative International Development*, vol. 39, pp. 30 – 57.
- [17] Tebaldi, E. and Elmslie, B. (2013). Does Institutional Quality Impact Innovation? Evidence from cross-country patent grant data. *Applied Economics*, vol. 45, iss. 7, pp. 887–900.

## The Impact of Firm Size on Functioning of the Innovation System in Poland

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### **Abstract**

*The primary objective of this study is to determine the impact of firm size on the innovation activity on the example of integrating still and parallel the developing country. In contrast to existing innovation policies in more integrated countries in EU, we argue that a key to accelerating development, absorption, and diffusion of new technologies is to support those activities in medium and large entities. Although in the more integrated EU countries the impact on innovation activity depends more on SME's, the new integrated countries should foster more on the medium and large firms in this transitional period and slowly (a very long term) make their efforts to the similarity for the policy of developed countries. Based on the empirical research of 5209 Polish enterprises, we model innovation activities concerning the firm size. The study includes a brief review of the Neo-Schumpeterian literature, followed by the description of study method. Next, we present results of the probit analysis. The paper ends with the conclusions, limitations, and main implications of this research including propositions of innovation policies interventions.*

**Keywords:** European Union, firm size, industry, innovation, integration

**JEL Classification:** L50, O30, O52, P23

### **1. Introduction**

In the past economists linked economic growth and innovation with monopoly and large companies. Schumpeter's (1942) first hypothesis assumes that economic growth takes place in the process of "creative destruction". Thus, the "traditional" industrial structures such as products, processes and organizations are constantly subjected to a confrontation with the 'new' innovation activities. This kind of "industrial change (...) is the basis of the functioning of the capitalist economy" (Schumpeter, 1942). This "creative destruction" is seen as the way of leading into higher profits and welfare. At the core of it lies risky innovation activity. The dynamics and systemic nature of innovation were introduced in the complex-system-oriented Neo-Schumpeterian evolutionary economics (Antonelli, 2011; Consoli Patrucco, 2011; Dopfer, 2011). According to this perspective, the innovation process at the enterprise level is considered as a set of activities related to each other through mutual feedback, while innovation is the result of an interactive learning process that often involves several actors from inside and outside the company (Lundvall, 1992). Innovation and its diffusion are thus the result of those collective interactions that evolve over time. They not only accelerate technological change, but give an opportunity for economic development in less developed countries. Our approach is focused on the determinants of the development and diffusion of innovation process and product (Edquist and McKelvey, 2000; Ranasinghe, 2017). Our concept of the

national innovation system assumes that it is a system of interrelated institutional and structural factors in the economy and society, manifested by three basic elements (industry, R&D and business institutions) and links between them. In such a system industry is defined as a set of entities operating in a given geographical territory. The actors of such a system can not only interact with each other but also with other institutions. Thus, both internal and external interactions are at the core of such a system. In Europe, the national innovation systems shape regional innovation systems' performance and form a functional network (Carrincazeaux & Gaschet, 2015). However, each country has a unique historical, geographical and cultural characteristics, different political and social systems, as well as economic and demographic features. Furthermore, innovation systems constantly evolve and therefore modern approach of the innovation process is referred to a dynamic interactive model of innovation (Freeman, 1987; Lundvall, 1992; Nelson, 1993). The impact of firm size on innovation activity has been discussed many times, but it is still ambiguous (Pérez-Cano, 2013; Gil, Figueiredo, 2013; Herrera, Sánchez-González, 2013). Moreover, this approach not only has evolved, but it has changed quite dramatically over time. At first, the ability to develop new technology was seen as the domain of large enterprises and imperfect competition (Schumpeter, 1934; Kamien, Schwartz, 1975). Drucker (2014) argued that small and medium enterprises are the most important innovators. The latest research suggest the importance of SMEs as sources of new-to-the-market innovation and the potential value of including such firms in future innovation studies (Dzikowski, 2018; Roper & Hewitt-Dundas, 2017). The impact of firm size on its innovation activity seems to be more heterogeneous in nature than previously assumed. It depends on many other factors (Audretsch, 1995, p. 175). The empirical analysis for 22 manufacturing sectors, broken down in three firm size classes, for eight European countries show that product and process innovations, though having some complementarities, are associated to different innovative inputs and strategies pursued by firms. Furthermore, the study confirms the differences in the determinants of product and process innovation, and the patterns emerging across firm size in European manufacturing industries (Vaona & Pianta, 2008). Much evidence exists in favor of the thesis of technological improvement in the economy by stimulating innovation in large entities. Such cases are common in economically underdeveloped countries, where entrepreneurship is not sufficiently well developed and widespread (Ács, Autio, & Szerb, 2014). In the "catching up" economies the industrial structure has a high share of low-tech entities which translates into a small share of high technology products in international trade. Based on the 10-years period of research on innovation of industrial enterprises in Poland, we assume that the improvement of the structure of international trade of domestic firms is based on the evolutionary changes in both the enterprise size classes as well as their technology (Świadek, 2007). New solutions are generally acquired by passive transfer of technology. The more the company takes part in the international industrial chain, the faster it adapts new technologies (Woodward, 2005). Furthermore, firm size has no effect on the types of implemented innovations. There are, however significant differences between the implementations and the initiation of these processes in firms in the world (Damanpour, 1992). It can therefore be concluded, that this polemic has not been completed, and the impact of firm size on the development of new technology seems to be a phenomenon much more diverse than previously thought. Studies conducted worldwide suggest higher public support for large companies due to higher probability of development for all market, whereas the same support used at SMEs level generates new solutions mainly at companies' level (Herrera, Sánchez-González, 2013; Pavione, Pezzetti, 2016). As argued Link (1980), large firms have an innovative advantage in markets with imperfect competition, but small firms are characterized by a higher predominance of innovation in markets similar to the model of perfect competition.

## 2. Problem Formulation and Methodology

The main hypothesis of the study is the assumption that innovative activity of enterprises, operating in the country aspiring to be called a developed economy, depends largely on their size. Furthermore, a better understanding of innovative processes and their limitations within the national innovation system may help to develop a unique set of diversified development paths that can accelerate and enable to manage the development, absorption and diffusion of new technology. The main objective of the study is to determine the impact of firm size on the innovation activity of the Polish industrial system. The secondary goal is to define boundary conditions for the model structure of national innovation networks that take into account the present level of development of Polish economy and allows to create a set of smart innovation policies. The survey conclusions represent only a part of results achieved during the research and further analysis. The study was based on a group of 5.209 industrial enterprises (the number of correctly completed and returned questionnaires), including 4615 enterprises with exclusive national capital, 281 with foreign capital and 313 companies with mixed ownership structure. The data cover a period of five years from 2008 to 2012. The database is constantly updated. Data were collected on the basis of a telephone interview and questionnaire. Only correctly completed questionnaires were qualified for next stages of analysis. Selection of the sample survey is approximately equal to the structure defined by the Central Statistical Office in Poland. Additionally, the survey includes firms employing less than 10 people. Thus, it is possible to map the functioning of national industrial system in Poland as a whole.

**Table 1. The Structure of Industrial Enterprises by Firm Size and Technology Level**

Firm size	Total [%]	Technology level	Total [%]
Micro (<10)	36.3	Low	52.2
Small (<50)	36.3	Medium low	29.6
Medium (<250)	21.5	Medium high	1.2
Large (>249)	5.9	High	5.0

Source: own research

The analyzes are static, which is important to maintain comparability of data and were conducted in a three-year arrangement in accordance with the standards of methodological innovation surveys carried out in OECD countries (OECD, 2005). In the case of a model where independent variable reaches a value of 0 or 1, the expected value of the dependent variable can be interpreted as the conditional probability of the event at fixed values of the independent variables (Berkson, 1944; Berkson, 1990; Aldrich, Nelson, 1984). Thus, we use a probit regression (Liao, 1994). The use of probit models helps to determine the probability of innovative behavior depending on the adopted boundary conditions. There are the following dependent variables: (a) expenditure on innovation activities in relation to their structure (research and development, investment in new machinery and equipment, investments in buildings, land and new computer software), (b) the implementation of new products and processes with detailed solutions in this area (new products, new processes), c) the innovative cooperation in terms of the subject (with suppliers, competitors, customers, universities, R&D labs, foreign research institutes). A set of independent variables reflects the innovation activity firm can adopt on the basis of the methodology used for the OECD countries (OECD, 2005). The statistical verification of models and their parameters were based on statistics Wald's Chi-square and associated test probability  $p$ , and Student's  $t$ -test. All calculations were performed by using Statistica software. Only models that meet the criteria for assessing the statistical significance parameters are presented with standard errors, statistics assessing the relevance

of the parameters and the probability of occurrence of phenomena. The positive sign in front of a parameter means that the probability of an innovative event is more likely in a given group of companies than the probability of it in other types of enterprises. There are seventy two logit models and the majority of them reached statistical significance.

### 3. Problem Solution

#### 3.1 Innovative Activity in Micro Enterprises Sector

In the group of micro enterprises logit models show uniform and interesting results. All logit models are statistically significant and have a negative parameter. This means that micro enterprises are statistically less likely to engage in any innovation activity than the other groups. These negative relations concern all three areas: financial investment in R & D, implementation of new processes and innovative cooperation. These results call into question the need to support that group through a variety of innovative policy instruments whether at national or regional level. Hence, the question arises whether Drucker assumption about the important role of micro enterprises in the generation and transfer of new knowledge in a country like Poland is correct.

**Table 2: The Parameter Value for the Independent Variable "Micro Enterprises" in the Probit Models Describing the System of Industrial Innovation in Poland**

Innovative feature	Parameter	Standard error	Student's t test	Chi2	P> z	p <sub>1</sub>	p <sub>2</sub>
R &D expenditure	-0.581	0.039	-15.00	231.64	0.00	0.23	0.43
Investment in new fixed assets (including):	-0.493	0.039	-12.66	160.35	0.00	0.66	0.81
a) buildings and grounds	-0.546	0.042	-13.05	177.63	0.00	0.15	0.31
b) technical equipment and machinery	-0.359	0.037	-9.65	93.01	0.00	0.59	0.72
Computer software	-0.427	0.037	-11.67	136.52	0.00	0.50	0.67
Launching new products	-0.267	0.036	-7.36	54.22	0.00	0.48	0.59
Implementation of new technology processes (including):	-0.553	0.038	-14.45	209.36	0.00	0.61	0.80
a) New production methods	-0.328	0.036	-9.00	81.49	0.00	0.40	0.53
b) Non production systems	-0.573	0.040	-14.49	216.93	0.00	0.20	0.40
c) Support systems	-0.411	0.041	-9.94	101.50	0.00	0.16	0.29
Cooperation with suppliers	-0.223	0.040	-5.62	31.90	0.00	0.22	0.29
Cooperation with competitors	-0.153	0.067	-2.29	5.36	0.02	0.03	0.05
Cooperation with Polish Academy of Sciences units	-0.298	0.103	-2.90	9.11	0.00	0.01	0.02
Cooperation with universities	-0.542	0.078	-6.94	55.79	0.00	0.02	0.06
Cooperation with domestic R&D units	-0.507	0.060	-8.46	78.54	0.00	0.04	0.11
Cooperation with foreign R&D units	-0.603	0.115	-5.25	35.25	0.00	0.01	0.03
Cooperation with customers	-0.248	0.042	-5.96	36.01	0.00	0.17	0.24
Overall innovative cooperation	-0.338	0.037	-9.18	85.03	0.00	0.35	0.48

Source: own research

Further analysis of the probabilities shows some other interesting regularities. First, there is wide variation between the values of the probabilities in the areas of financing, implementation

and innovation cooperation. Although micro enterprises are less than the other companies keen to finance and implement new solutions, they are much more interested in those aspects of innovation rather than entering into innovative cooperation. High probability values are for investments in fixed assets (0.66), including the purchase of technical equipment and machinery (0.59) and software (0.50), implementation of new products (0.48) and processes (0.61), with emphasis on new methods of production (0.40). In the area of innovative cooperation they are much more interested in the vertical linkages - with suppliers (0.22) and customers (0.17), while those of a horizontal nature occur very rarely, regardless of the kind of entity (probability close to zero). To sum up micro enterprises are significantly less likely to carry out various forms of innovative activity, mainly in the area of R & D, investments in new buildings, the implementation of new technological processes in non-production systems and innovative horizontal cooperation. Nevertheless, there are areas that could potentially be supported by different mechanisms of innovation policy. This applies to the purchase and implementation of new machinery and equipment, implementation of new products and production methods. Hence, we believe that this group of companies inhibits technological progress in the Polish economy, and thus at this stage of development they should not be supported by innovation policy instruments. However, support instruments should be used when companies take deliberate actions to create new technologies (positive parameters, but small probabilities).

### 3.2 Innovative Activity in Small Enterprises Sector

Small enterprises sector is the second largest group of companies in the study, but there is the smallest number of statistically significant models as well. This is not an unexpected phenomenon. Moreover, the estimated parameters in the two cases have the negative sign, while in two successive positive.

**Table 3: The Parameter Value for the Independent Variable "Small Enterprises" in the Probit Models Describing the System of Industrial Innovation in Poland**

Innovative feature	Parameter	Standard error	Student's t test	Chi2	P> z	p <sub>1</sub>	p <sub>2</sub>
R & D expenditure	-0.091	0.037	-2.45	6.02	0.01	0.34	0.37
Investment in new fixed assets	+0.136	0.040	3.41	11.72	0.00	0.78	0.74
Implementation of new technology processes	+0.138	0.039	3.54	12.56	0.00	0.76	0.71
Cooperation with foreign R&D units	-0.249	0.092	-2.71	7.80	0.01	0.01	0.02

Source: own study

There is a slight chance that small companies might carry out R&D activity or cooperate with foreign R&D units in comparing to other class sizes. In contrast there are great chances that they invest in new fixed assets and implement new technology processes. Thus, the sector of small-sized enterprises is concentrated on passive, but technologically advanced transfer of knowledge. It turns out that the small industrial enterprises in Poland do not have a pro-innovation approach, but at the same time they are not anti-innovation, as previously described micro-entities. Thus, one can say with a high probability that in the next few years, small businesses under the influence of appropriate support should become a pillar of innovation in Poland. It is also worth noting that the systemic use of national innovation policy instruments will contribute to the further deepening of structural differences in the Polish industry. One of the reasons is easier access to these resources in the most developed regions. In conclusion, small industrial enterprises in Poland are in a transitional phase between the lack of interest in

innovation activities and active involvement. These changes are evolutionary in nature, and therefore require time. The use of systemic mechanisms to stimulate this sector, however, will lead to increasing polarization between regional efforts in the area of innovative companies. It remains an open question whether the improvement in innovation performance of the economy should be guided by the desire to reduce the differences between the provinces, or perhaps we should focus on the strong acceleration of innovation processes where they have a high chance of occurrence.

### 3.3 Innovative Activity in Medium Enterprises Sector

In the group of medium-sized industrial enterprises seventeen statistically significant models were estimated. All models have positive function parameters what suggests that this sector is more innovative then other groups. This phenomenon is the systemic nature all over the country and it differs from what we observed in micro and small enterprises sectors.

**Table 4: The Parameter Value for the Independent Variable "Medium Enterprises" in the Probit Models Describing the System of Industrial Innovation in Poland**

Innovative feature	Parameter	Standard error	Student's t test	Chi2	P> z	p <sub>1</sub>	p <sub>2</sub>
R &D expenditure	+0.521	0.043	12.21	149.37	0.00	0.52	0.31
Investment in new fixed assets (including):	+0.431	0.051	8.52	76.30	0.00	0.85	0.73
a) buildings and grounds	+0.421	0.044	9.55	90.32	0.00	0.37	0.22
b) technical equipment and machinery	+0.317	0.046	6.92	49.04	0.00	0.76	0.65
Computer software	+0.419	0.045	9.37	89.97	0.00	0.73	0.57
Launching new products	+0.206	0.043	4.81	23.22	0.00	0.61	0.53
Implementation of new technology processes (including):	+0.463	0.049	9.39	92.63	0.00	0.84	0.70
a) New production methods	+0.233	0.042	5.48	30.14	0.00	0.55	0.46
b) Non production systems	+0.456	0.043	10.62	112.48	0.00	0.46	0.29
c) Support systems	+0.402	0.044	9.06	81.06	0.00	0.35	0.21
Cooperation with suppliers	+0.141	0.045	3.16	9.86	0.00	0.30	0.25
Cooperation with Polish Academy of Sciences units	+0.245	0.097	2.54	6.16	0.01	0.02	0.01
Cooperation with universitites	+0.354	0.067	5.27	26.69	0.00	0.07	0.04
Cooperation with domestic R&D units	+0.355	0.056	6.33	38.76	0.00	0.13	0.07
Cooperation with foreign R&D units	+0.416	0.086	4.86	22.43	0.00	0.04	0.01
Cooperation with customers	+0.151	0.046	3.26	10.50	0.00	0.25	0.20
Overall innovative cooperation	+0.264	0.042	6.23	38.84	0.00	0.51	0.41

Source: own research.

The detailed analysis of the calculated probabilities show some interesting regularities. Firstly, some of the innovative activities have high chances of occurrence, although there is also large internal differentiation. The probability of implementation of new technology processes is (0.84) whereas the probability of implementation of new production methods decreases to (0.55). The probability of implementation of nonproduction systems decreases to (0.46). Finally the probability of implementation of support systems amounts (0.35). This appears to be the example of typical substitution effect. Companies typically implement one of the three technologies, but they rarely implement all at once. It may be due to high capital requirements. Secondly, the high probability of funding and implementation of new products and processes are opposed to low chances of innovative collaboration. The probability of vertical innovative cooperation is much higher than the probability of horizontal one. Innovative cooperation is also subject to large internal variation, as indicated above for the implementation processes. The chance of overall innovative cooperation amounts to as much 51.0%, while the probability of innovation cooperation with suppliers is 30.0%. Medium-sized companies quite often take cooperation in vertical industrial chains what leads to the creation of new technological solutions. Finally, the probability values indicate which areas of innovation activity require special interest and support. At this point, we should pay special attention to the thresholds. This raises the question about the legitimacy of public support for innovative activities which probabilities are very close to the extreme values of 0 or 1. Low probability of innovative activity will remain low even after the application of broad public support. On the other hand, when the probability is high (greater than 0.70), innovation policy enters the areas in which the market is already fully operational. Perhaps it would be advisable to support those areas in which the probability of innovation is between (0.30) and (0.60). Then, there is a good chance to effectively stimulate those enterprises which are not as innovative as they would like and positively affect the whole industrial system. In the case of medium enterprises, those areas include: funding for research and development, investment in new buildings, the implementation of new products and processes (large internal differentiation in processes should be concerned), overall innovative cooperation (particularly with suppliers and customers). To sum up, medium enterprises are much more active in the area of innovation than micro and small companies, thus they are a main stimulator of innovation processes in the national industrial system. This impact is therefore systemic nature, which is particularly important when trying to program effective innovation policy instruments. The strength and scale of the impact of this sector on industry innovation can be described as substantial. At the same time there is a great diversity of activities what proves their substitutable character. This diversity creates the need for developing a system of support depending on the goals we intend to achieve in this group of enterprises both at national and regional levels.

### ***3.4 Innovative Activity in Large Enterprises Sector***

Large companies are the least-represented group of entities. There are 309 enterprises that participated in the survey. All probit models have proved to be statistically significant. What is more important all take a positive sign, which means that large firms, as previously described medium-sized enterprises have a positive impact on innovation processes. This effect is also a systemic nature.



**Table 5: The Parameter Value for the Independent Variable "Large Enterprises" in the Probit Models Describing the System of Industrial Innovation in Poland**

Innovative feature	Parameter	Standard error	Student's t test	Chi2	P> z	p <sub>1</sub>	p <sub>2</sub>
R &D expenditure	1.001	0.077	12.88	177.28	0.00	0.72	0.33
Investment in new fixed assets (including):	+0.411	0.091	4.53	22.01	0.00	0.86	0.75
a) buildings and grounds	+0.457	0.074	6.14	37.08	0.00	0.41	0.25
b) technical equipment and machinery	+0.363	0.082	4.43	20.47	0.00	0.79	0.67
Computer software	+0.546	0.082	6.67	47.29	0.00	0.78	0.60
Launching new products	+0.312	0.076	4.13	17.32	0.00	0.66	0.54
Implementation of new technology processes (including):	+0.601	0.094	6.38	45.50	0.00	0.88	0.72
a) New production methods	+0.423	0.075	5.66	32.56	0.00	0.64	0.47
b) Non production systems	+0.575	0.074	7.81	61.23	0.00	0.53	0.31
c) Support systems	+0.528	0.074	7.10	49.53	0.00	0.42	0.23
Cooperation with suppliers	+0.358	0.075	4.78	22.45	0.00	0.38	0.25
Cooperation with competitors	+0.357	0.108	3.30	10.02	0.01	0.08	0.04
Cooperation with Polish Academy of Sciences units	+0.383	0.142	2.69	6.44	0.01	0.04	0.01
Cooperation with universities	+0.488	0.102	4.80	20.97	0.00	0.10	0.04
Cooperation with domestic R&D units	+0.599	0.085	7.02	45.79	0.00	0.20	0.07
Cooperation with foreign R&D units	+0.722	0.114	6.34	34.72	0.00	0.08	0.02
Cooperation with customers	+0.468	0.076	6.20	37.45	0.00	0.36	0.20
Overall innovative cooperation	+0.550	0.075	7.36	55.30	0.00	0.63	0.42

Source: own research

By analyzing the probability levels we can notice that, in the areas of financing and implementation of new technologies, they range in values from (0.41) to (0.88). Hence, it means a very high chance of implementation of these activities. So, if probability of a given innovation activity is high should we support this kind of innovation activity? In other words, if innovation policy supports highly likely innovative activities, it will replace effective market mechanisms. On the contrary, large companies behave in the area of overall innovative cooperation. The chance of overall cooperation in the area of innovation is 63%. However, the structure of this cooperation seems to be diversified. It was found that the highest probability is for innovative cooperation with suppliers (0.38), customers (0.36) and domestic R&D units (0.20). The latest should become important areas of potential support, with good prospects for sparking innovative processes in Poland. In other cases, innovative cooperation opportunities are in the range of 4% -10% and again the question arises about the legitimacy of the system to stimulate innovation cooperation between companies that are generally not interested in it. This concerns mainly cooperation with competitors, cooperation with Polish Academy of Science units and cooperation with universities or foreign R&D units. Unfortunately most of those institutions play central roles in public support programs in Poland (those associated with cluster development and cooperation between science and business). This fact may explain why these institutions have so low impact on the growth of innovation in Poland. And this is due to the current level of development of the Polish economy, the low level of confidence in the market (high transaction costs) results in the low dynamism of innovative industrial system. In conclusion, large industrial enterprises in Poland positively and systematically support innovation processes in the economy, just as medium-sized companies, with the difference that the probabilities take much higher values. We express serious doubts about the legitimacy

of supporting large companies by public funds in the areas of R&D funds and implementation with some small exceptions. However it would be advisable to support innovation cooperation with both suppliers and customers and domestic R&D units. Perhaps such help may accelerate positive changes within the whole industrial system. It is worth mentioning that the conclusions reached on the basis of the study are very detailed and often different from national assumptions made for public innovation support programmes in Poland. It seems that public innovation support programmes do not take into account neither the nature of the Polish economy nor the level of development of the domestic industry, and are often adopted without reflection from countries with a much richer tradition in building a market economy. Thus, their performance is so poor and often raises controversy about the legitimacy of the acquired targets, directions and methods of implementation.

#### **4. Conclusion**

Firm size directly effects the innovative activity of Polish industrial enterprises and it indirectly affects the national innovation system in Poland. Furthermore, the activity of micro enterprises negatively supports innovation at the present stage of economic development of the industrial system in Poland. In the last 15 years a deep process of institutional reforms and economic reorganization took place in central and eastern EU countries (CEE) and these changes occurred in a context of general economic integration. This economic integration includes innovation facilitation. Nevertheless, developing national innovation policies should include national economic conditions. Hence, in the case of the limited availability of public funds to stimulate innovation activities, support should be directed to more promising sectors to achieve higher growth. Small enterprises, in turn, are in a transitional phase between the lack of interest in innovation activity and keeping it active. These changes are evolutionary in nature, and therefore require time. The use of systemic mechanisms to stimulate this sector, however, will lead to increasing polarization of regional innovation efforts. It is an open question whether the improvement in innovation performance should be guided by the desire to reduce disparities between regions, or perhaps we should focus on the strong acceleration of innovation processes where they have a high chance of occurrence. Medium sized enterprises are one of the two main promoters of innovation processes in the national industrial system. Their influence is systemic nature, what is particularly important when trying to program effective innovation policy instruments. Their power to influence and more importantly the potential scale of the impact on the entire industry can be described as significant. The high diversity of innovative activities rather proves their substitutability than complementarity. Hence, the need to develop a variety of support options, depending on the objectives. Impact of large enterprises is also systemic and positive, but it reaches higher values of probability. However, there are some doubt whether financing and implementation of innovation should be supported in large enterprises. On the contrary, we believe that supporting cooperation between large enterprises and national R&D units will help to increase industrial innovation within the national innovation system. It seems that currently implemented public support for innovation in Poland does not take into account the characteristics and level of development of the national industry. Thus, its performance is so poor and often raises controversy about the legitimacy of the acquired targets, guidelines and methods for their implementation. Economic literature does not clearly identify what type of firm size should be responsible for the processes of creating new technologies especially in countries, where so called "technological gap" is estimated for several decades. Although it is believed that the SME sector is mainly responsible for the dynamic process of diffusion of new developments in the local and regional market (endogenous growth theory) whereas their technological level is not important. However, we believe that these interactions often depend on the specifics of the

given industrial system and its present phase of its development. According to evolutionary perspective, with an increase in industrial capacity and improve its competitiveness, the responsibility for accelerating technological progress is moving from large to small firms. However, the owners of micro enterprises prefer no risky activities in Poland. It is recommended that national innovation policy should not only take into account the need for different pro-innovation mechanisms for different firm sizes, but it also should relate to different stages of maturity of the national industrial system to better support development, absorption and diffusion of new technology.

## References

- [1] Ács, Z. J., Autio, E., Szerb, L. (2014). National Systems of Entrepreneurship: Measurement issues and policy implications. *Research Policy*, vol. 43, iss. 3, pp. 476–494.
- [2] Aldrich, J. H. and Nelson, F. D. (1984). *Linear Probability, Logit, and Probit Models*, vol. 45, SAGE Publications Ltd.
- [3] Antonelli, C. (2011). *Handbook on the Economic Complexity of Technological Change*. Cheltenham & Northampton: Edward Elgar.
- [4] Audretsch, D. (1995). *Innovation and Industry Evolution*. Cambridge: MIT Press.
- [5] Berkson, J. (1944). Application of the logistic function to bio-assay. *Journal of American Statistic Association*, vol. 39, pp. 357-365.
- [6] Berkson, J. (1990). *Maximum likelihood in the Pharmaceutical Science*. New York: Marcel Dekker.
- [7] Carrincazeaux, C. and Gaschet, F. (2015). Regional Innovation Systems and Economic Performance: Between Regions and Nations. *European Planning Studies*, vol. 23, iss. 2, pp. 262-291.
- [8] Consoli, D. and Patrucco, P. (2011). Complexity and the coordination of technological knowledge: the case of innovation platforms. In Antonelli, C. (eds.). *Handbook on the Economic Complexity of Technological Change*. Cheltenham & Northampton: Edward Elgar, pp. 201-220.
- [9] Damanpour, F. (1992). Organizational size and innovation. *Organization Studies*, vol. 13, iss. 3, pp. 375-402.
- [10] Dopfer, K. (2011). Mesoeconomics: a unified approach to systems complexity and evolution. In Antonelli, C. (eds.). *Handbook on the Economic Complexity of Technological Change*. Cheltenham & Northampton: Edward Elgar, pp. 341-356.
- [11] Drucker, P. (2014). *Innovation and Entrepreneurship*. London: Routledge.
- [12] Dzikowski, P. (2018). A bibliometric analysis of born global firms. *Journal of Business Research*, vol. 85, pp. 281-294.
- [13] Edquist, C. and McKelvey, M. (2000). Introduction. In Edquist, C., and McKelvey, M. (eds.). *Systems of Innovation: Growth, Competitiveness and Employment*. Cheltenham: Edward Elgar Publishing, pp. 1-39.
- [14] Freeman, C. (1987). *Technology policy and economic performance: Lessons from Japan*. London: Pinter Publishers.

- [15] Gil, P.M. and Figueiredo, F. (2013). Firm size distribution under horizontal and vertical innovation. *Journal of Evolutionary Economics*, vol. 23, pp. 129-161.
- [16] Herrera, L. and Sánchez-González, G. (2013). Firm size and innovation policy. *International Small Business Journal*, vol. 31, no. 2, pp. 137-155.
- [17] Kamien, M. I. and Schwartz, N. L. (1975). Market Structure and Innovation: A Survey. *Journal of Economic Literature*, vol. 13, no. 1, pp. 1-37.
- [18] Liao, T. F. (1994). *Interpreting Probability Models. Logit, Probit, and Other Generalized Linear Models*, vol. 101. SAGE Publications Ltd.
- [19] Link, A. N. (1980). Firm Size and Efficient Entrepreneurial Activity: A Reformulation of the Schumpeterian Hypothesis. *Journal of Political Economy*, vol. 88, no. 4, pp. 771-782.
- [20] Lundvall, B. A. (1992). *National systems of innovation. Towards a theory of innovation and interactive learning*. London: Pinter Publishers.
- [21] Nelson, R. R. (1993). *National innovation systems: A comparative analysis*. Oxford: Oxford University Press.
- [22] OECD, (2005). *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data*. Paris.
- [23] Pavione, E. and Pezzetti, R. (2016). Technological Clusters in Europe as a Tool of a European Industrial Policy based on Innovation. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 731–737.
- [24] Pérez-Cano, C. (2013). Firm size and appropriability of the results of innovation. *Journal of Engineering and Technology Management*, vol. 30, iss. 3, pp. 209-226.
- [25] Ranasinghe, A. (2017). Innovation, firm size and the Canada-US productivity gap. *Journal of Economic Dynamics & Control*, vol. 85, pp. 46-58.
- [26] Reid, A. (2000). Industrial policy in Wallonia: A rupture with the past? *European Planning Studies*, vol. 8, iss. 2, pp.183-199.
- [27] Roper, S. and Hewitt-Dundas, N. (2017). Investigating a neglected part of Schumpeter's creative army: what drives new-to-the-market innovation in micro-enterprises?. *Small Business Economics*, vol. 49, iss. 3, pp. 559-577.
- [28] Schumpeter, J. A. (1934). *The Theory of Economic Development: An Inquiry Into Profits, Capital, Credit, Interest, and the Business Cycle*. Cambridge MA: Harvard University Press.
- [29] Schumpeter, J. A. (1942). *Capitalism, socialism and democracy*. New York: Harper & Row.
- [30] Świadek, A. (2007). *Determinanty aktywności innowacyjnej w regionalnych systemach przemysłowych w Polsce*. Szczecin: Wydawnictwo Naukowe US.
- [31] Vaona, A. and Pianta, M. (2008). Firm Size and Innovation in European Manufacturing. *Small Business Economics*, vol. 30, iss. 3, pp. 283-299.
- [32] Woodward, R. (2005). *Sieci innowacji w Polskiej gospodarce – stan obecny i perspektywy rozwoju*. Warszawa: Centrum Analiz Społeczno-Ekonomicznych.

## **Amendments to the International Financial Reporting Standards in Connection with European Union Integration**

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### **Abstract**

*The process of globalization of markets, connected among others with the integration of the European Economic Area (EEA), generates the need to adopt universal regulations that will ensure direct comparability of the information presented in the financial statements of enterprises operating in different countries of European Union. The aim of the article is to present the changes that have been introduced in the International Financial Reporting Standards (IFRS), which have entered into force in Poland since January 2018. The applied research methods involve a review of legal acts and literature on the subject as well as the use of data from reports on the implementation of IFRS in Poland. As a result of the analysis, it was observed that countries which, like Poland, belong to the EEA, implement changes and new IFRS to their law, which means that every year enterprises must adapt their reporting to new regulations. Based on the results of the analysis, the subjective scope of the obligatory and optional preparation of financial statements according to IFRS was presented in accordance with the applicable Polish law. Problems and benefits resulting from the implementation and application of new IFRSs were also presented.*

**Keywords:** *European integration, European Union, International Financial Reporting Standards*

**JEL Classification:** *M41, M40, M48*

### **1. Introduction**

Globalization has become the most important phenomenon of the global economy (Baláž, 2014), and accounting is a scientific field strongly influenced by the European integration process. The economic processes within the European Union (EU) forced the need for standardization in the area of financial audit. Such action is aimed at unifying the interpretation of reporting documents. The principles applied in this field should help in preparation of reports created by capital groups, increase comparability of information contained in those reports, and in the process, lead to an unambiguous interpretation of data as well as their reliability and credibility. The uniformization of EU law in the area of accounting was the directive in this area. The legal nature of EU law allowed to choose the methods and means of their implementation in connection with local traditions and practices (Świetla, 2008).

In the present article, we will discuss the problems concerning unification of accounting solutions within the framework of European integration and in relation to the systems of countries outside the European Union.

## **2. Problem Formulation and Methodology**

An important part in the European integration process is formed by the harmonization and standardization of accounting and financial reporting, which is aimed at ensuring transparency and comparability of financial statements of economic units originating from countries with different legal systems, socio-economic determinants, and cultural traditions. The transparency and comparability of financial reports, which are used by various groups of stakeholders, should be ensured by the International Financial Reporting Standards (IFRS) established by the International Accounting Standards Board (IASB), a major institution in the area of worldwide unification of accounting. The EU member states, including Poland, are required to apply EU directives, five of which relate to accounting. Subsequent changes and new IFRS are incorporated into the community law in the form of regulations of the European Commission and are implemented to the national law of EU members. In Poland, listed companies and financial institutions are obliged to apply IFRS. This obligation and acceleration of work on standards took place in connection with the financial crisis and collapse of large enterprises in recent years. Changes in IFRS mean that every year enterprises must adapt their reporting to new regulations.

The aim of the article is to present the changes that have been introduced in the IFRS, and have come into force in Poland since January 2018. To achieve this objective, legal acts and literature on the subject were reviewed as well as data from reports on the implementation of IFRS in Poland was used.

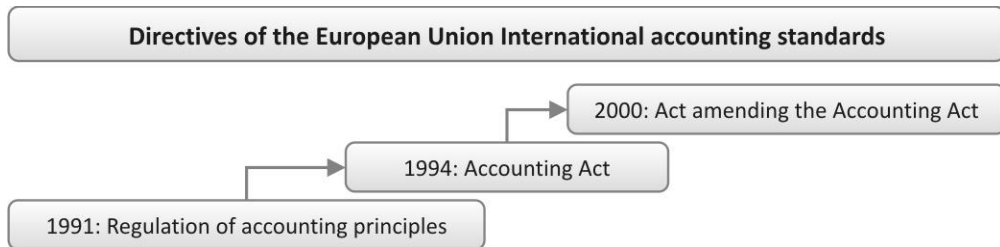
## **3. Premises for Applying Unified Accounting Principles as Part of the European integration**

The concept of integration is used on the basis of various sciences and areas of life. It means fusing, merging, making a whole from parts. Integration processes are one of the most characteristic phenomena occurring in contemporary Europe. European integration is a form of international and regional integration, a process that occurs on economic and political planes (Kalinowska, 2015). In order to remove regional economic disparities, the EU realizes a cohesion policy. Such policy is justified economically and socially. The structural funds contribute to the increase of GDP per capita as well as to the reduction of unemployment, as described by Dorożyński in his studies in paper on effectiveness of the EU cohesion policy and its impact on the development of regions (Dorożynski, 2012).

In the light of European integration, diversification plays an important role in accounting. This variety may be seen in the way the financial information is presented, as well as the way in which this information is interpreted by both internal and external recipients. The main purpose of standardization processes has become the normalization of the accounting field in the European Union countries, and the unification of principles of the area in the world (Krasodomska, 2008). Undoubtedly, the strongest effects of globalization can be seen in the financial system (Dvoroková, 2014), in which there are many factors affecting the accounting system. The globalization of the economy and the integration of financial markets combined with their liberalization have influenced the development of financial markets. Processes indicated in this study affect the functioning of the financial system positively, leading to increase in the efficiency of institutions and financial markets. Globalization means that interdependent functioning global economy raises world-wide problems. Financial crises they do not touch individual economies, but they have an international dimension (Domańska - Szaruga, 2009).

C. Nobes and R. Parker point out seven elements involved in discrepancies in accounting and financial reports. They are the following: legal systems, sources of financing business operations, tax systems, the accounting profession, inflation, accounting theory, and historical events (Nobes, Parker, 2000). In discussing the impact on the accounting, S. Lawrence points to four leading factors, which are the following: cultural, political, legal and economic (Lawrence, 1996) causes. The specificity of each country's accounting system originates from the law of the state in which the system is applied. This means that accounting becomes an obstacle to decisions being taken by the global market participants. Figure 1 shows the impact of the applied solutions on the unification of the Polish Accounting Act.

**Figure 1: The Process of Harmonization of the Polish Accounting Act**



Source: Own elaboration (Giedroyć, Jezierska, 2001)

#### 4. Amendments to IFRS Introduced in 2018 in Poland

The purpose of the International Financial Reporting Standard 15 Revenue from contracts with customers, is to establish the principles according to which an entity provides users with financial reports containing useful information pertaining to the nature, amount, time and uncertainty of revenues and cash flows arising from contracts with customers.

In accordance with the standard, revenues are recognized in such a way as to reflect the transfer of promised goods or services to the client in an amount that presents the remuneration to which they will be entitled in exchange for those goods or services. By applying this standard, the entity takes into account the terms of the contract and all relevant facts and circumstances. It also includes all practical solutions pertaining to contracts of similar characteristics and made in similar circumstances (Commission Regulation (EU) 2016/1905 of 22 September 2016 ).

According to the new standard, for many entities that sell various services and goods under a single contract with the client, the transfer of goods and services will take place in different reporting periods. Currently, the recognition of revenue included mostly values specified in the contract. After January 1, 2018, revenue will be recognized in relation to the prices of goods and services that the entity would use in a regular sale transaction. This means that some revenues will be recognized for tax purposes (those will be based on the values specified in the contract), and other for accounting purposes (The Legal newspaper, 2018). In accordance with the standard, a change in the value of recognized revenues may occur for many companies. It includes entities that sell different services and goods under one contract with the customer.

Published in 2014 and introduced 4 years later, amendments to the International Financial Reporting Standard no. 9 (entitled Financial Instruments) were to improve financial reporting on financial instruments, with relation to the problems that emerged in this area during the financial crisis (Commission Regulation (EU) 2016/2067 of 22 November 2016 ).

The purpose of the standard is to amend financial reporting principles for financial assets and financial liabilities. Such principles would be useful to provide information for users of such reports who could assess the amount, timing, and uncertainty of future cash flows of a given entity (Commission Regulation (EU) 2016/2067 of 22 November 2016 ). The draft of IFRS 9 has been implemented since 2008 and was to replace the International Accounting Standard 39. The implementation was carried out in stages. New requirements for classification and valuation were published in 2009. Next year, new requirements related to financial liabilities and removal of items from the balance sheet were added. And in 2013, changes regarding the general model of hedge accounting (Deloitte, 2016) were issued.

Significant changes to the standard are introduced in the following areas:

- classification and valuation of financial assets and liabilities;
- impairment of financial instruments;
- hedge accounting;
- impact of own credit risk on the valuation of financial liabilities.

The largest impact of IFRS 9 will affect financial institutions, especially the credit loss model. The standard introduces a new model of impairment loss recognition - the expected credit losses (ECL) model. Until now, the impairment loss was recognized only when there was objective evidence such as financial difficulties or failure to meet the terms of the agreement by the debtor. Under the new rules, as early as the initial recognition of financial assets in the balance sheet, enterprises will have to estimate the expected credit losses using a three-step model based on changes in credit risk (PwC, 2017).

The current model of the division of assets has been replaced by a classification referring to the business model used by the enterprise, and to the nature of the flow from the instruments. The consequence is the adoption of an appropriate valuation method, e.g. an amortized cost valuation or value measurement (Pielichaty, 2016).

IFRS 9 introduces a highly modified model of hedge accounting, including the extended obligation to disclose information on risk management. It is a fundamental reorganization of hedge accounting since it combines accounting principles and risk management, allowing for better presentation of these activities in financial statements (Mazurowska, 2015).

## **5. Problems Related to the Introduction of IFRS in Poland**

The goal of unifying accounting regulations on an international scale is:

- minimizing the ways of presenting business results by enterprises operating in different markets;
- increasing the comparability of financial statements of enterprises from different countries (Dratwińska - Kania, 2011).

Poland's accession to the EU imposed the obligation to adopt national accounting and financial reporting solutions to EU standards. The possibility of raising capital for Polish companies was connected with the need to apply IAS and IFRS from January 1, 2005. For listed companies and domestic recipients of information accustomed to reports prepared pursuant to the Accounting Act, these changes have become a serious impediment, because it is they who have to present and interpret data included in financial statements (Wasilewski, Rusinkiewicz, 2008).

In Poland, regulations regarding financial reporting, relating to aspirations for European integration, oblige some entities (i.e. those listed in the public sector) to apply IFRS. Other companies defined in the EU directive on financial reporting may report in a greatly simplified



way. This leads to a serious difference in terms of transparency and comparability of information provided to those interested in financial statements of reporting units and their financial activities (Ignatowski, 2016).

Amendments and new IFRS are incorporated into EU law in the form of implementing regulations of the European Commission. Issues related to international standards in the European Union are regulated by Commission Regulation (EC) No 1126/2008 adopting 29 IAS and 8 IFRS. By the end of 2013, there were 39 more Commission regulations amending Regulation No. 1126/2008 (Frymus, 2014).

**Table 1: Approved and Implemented Changes to IFRS and IAS in 2015-2018**

Name of the standard	Year of introduction
IFRIC 21 Public Fees	2015
IFRS 1 Application of IFRS for the first time	2015
IFRS 3 Business Combination	2015
IFRS 13 Fair Value Measurement	2015
IAS 40 Investment Properties	2015
Amendments to IAS 19 Employee Benefits	2016
IFRS 2 Share-based Payments	2016
IFRS 3 Business Combinations	2016
IFRS 8 Operating Segments	2016
Amendments to IAS 16 Property, Plant and Equipment	2016
IAS 38 Intangible Assets	2016
IAS 24 Related Party Disclosures	2016
Amendments to IFRS 11 Joint Contractual Arrangements	2016
Amendments to IAS 41 Agriculture	2016
Amendments to IAS 27 Separate Financial Statements	2016
Amendments to IFRS 10 Consolidated Financial Statements	2016
Amendments to IFRS 12 Disclosure of Interests in Other Entities	2016
IAS 28 Investments in Associates	2016
Amendments to IAS 1 Presentations of Financial Statements	2016
IFRS 5 Non-current Assets Held for Sale and Discontinued Operations	2016
IFRS 7 Financial Instruments, Information to be Disclosed	2016
IAS 34 Interim Financial Reporting	2016
Amendments to IAS 12 Recognition of Deferred Income Tax Assets Resulting from Unsettled Tax Losses	2017
Amendments to IAS 7 Disclosure Initiative	2017
IFRS 9 Financial Instruments	2018
IFRS 15 Revenue from Contracts with Customers	2018

Source: Own elaboration

Table 1 presents the changes and new IFRS that were approved and introduced in Poland from 2015 to 2018. As we can see, there are regular changes to IFRS every year. Existing standards are being supplemented and clarified, new ones are also published, including previously unidentified issues and new challenges to financial reporting. Preparing financial statements in accordance with IFRS is compulsory for companies listed on stock exchanges, for the

banking sector, and entities whose parent companies prepare financial statements in accordance with IFRS. These entities are grappling with new changes every year, which generates additional costs, and requires changes in IT systems or internal policies, which in turn involves time and preparation. Monitoring the changes which take place in MSSF is not easy due to a number of implemented modifications in the current regulations, but also announcing new standards. It is important to prepare oneself for applying new regulations and effective use of time between the moment of the publication of a new standard and the date it is used, both at the national level and at the enterprise level. An example is a situation which was present in Poland in 2015 when the International Financial Reporting Interpretations Committee's (IFRIC) Interpretation entered into force and was related to taxes and charges. Many banks and supervisory authorities were discussing how to adjust the content of the Interpretation to the Bank Guarantee Fund charges applicable in our country (PwC, 2017). It caused uncertainty and, in some cases, changes in financial data. It is important to monitor the publications of regulations on an ongoing basis and analyse their influence on accounting and reporting of units. Amendments made very often influence on not only accounting processes, but also on operational actions, thus it is significant to introduce the policy of implementation of amendments made by the standards.

## **6. Conclusion**

Globalization processes in the world economy as well as the integration of the states forming the European Union have forced the need for standardization and harmonization of accounting and reporting in enterprises, and the adoption of uniform regulations by all member states. The advantage of adopting common rules is the opportunity to present a reliable and clear picture of the company, which increases the reliability of reports, and makes it easier for investors to invest effectively. The financial reports of entities applying IFRS are comparable to the reports of other companies, including foreign companies, which facilitates raising capital on foreign stock exchanges, and increases investment efficiency, reducing the costs associated with preparing reports according to a uniform convention.

The implementation of IFRS is also associated with some inconveniences. The transition to IFRS is a complex, very time-consuming and expensive process. The main problems concern the following:

- companies not subjected to obligatory control are not able to use many simplifications allowed by the Accounting Act, and not provided by regulations included in IFRS;
- some entities cannot apply national regulations regarding financial instruments;
- there is the need to specify and keep books in a functional currency other than zloty;
- there are difficulties in determining the correct value of fixed assets.

Other problems include deficiencies in the knowledge of accountants in the scope of applying IFRS. Additionally, entities applying IFRS are subject to the mandatory control of the statements. Another problem is the specificity of the Polish economy not regulated in IFRS, e.g. the right of perpetual usufruct of land, social facilities, low-value assets.

Over the years, the introduction of IFRS has been modified many times, and according to the authors, it can be assumed that this process has not yet been completed as evidenced by the fact that the work on IFRS and IAS is ongoing, and the IASB has approved IFRS 16 Leasing to be used after January 1, 2019. The financial situation of enterprises is crucial for the financial stability of world economy. A new model of financial assets' impairment should improve quality of financial statements in terms of the prediction of possible future losses.

## References

- [1] Baláž P. (2014). *Globalization of the World Economy and the Impact of China's Expansion on the Competitiveness of EU*. Slovakia: International Conference on European Integration.
- [2] Commission Regulation (EU) 2016/1905 of 22 September 2016 adopting certain international accounting standards in accordance with Regulation (EC) No 1606/2002 of the European Parliament and of the Council as regards International Financial Reporting Standard 15.
- [3] Commission Regulation (EU) 2016/2067 of 22 November 2016 adopting certain international accounting standards in accordance with Regulation (EC) No 1606/2002 of the European Parliament and of the Council as regards International Financial Reporting Standard 9.
- [4] Domańska-Szaruga B. (2009) *Globalization of financial markets*. Poland: Siedlce University of natural sciences and humanities.
- [5] Dorożyński T. (2012) *Effectiveness of the EU cohesion policy and its impact on the development of regions*. Katowice: Science journal of the University of Economics in Katowice. *International economic relations - regional integration in Europe and shines*, pp. 69-79.
- [6] Dratwińska-Kania B. (2011). *Unification of accounting regulations on an international scale and its main problems*. *Economic Studies*. Science journal of the University of Economics in Katowice, vol. 873, pp. 21-38.
- [7] Dvoroková K. (2014). *Impact of Economic Crisis on the International Monetary System*. Slovakia: International Conference on European Integration.
- [8] Frymus M. (2014). *Entities obliged and authorized to apply International Financial Reporting Standards in Poland*. Science journal of the University of Szczecin, vol. 827, pp. 25-35.
- [9] Giedroyć M., Jezierska E. (2001). *Harmonization of accounting in Poland [in:] Evolution of Polish accounting against the background of global solutions*, edit. B. Micherda. Cracow: Cracow University of Economics, materials for the national conference of accounting chairs, pp. 63.
- [10] Ignatowski R. (2016). *Standardization of financial reporting in the European Union in Poland against the background of global trends – a critical assessment*. *Economic Studies*. Science journal of the University of Economics in Katowice, vol. 299, pp. 128-136.
- [11] International Financial Reporting Standard 9 Financial Instruments Commission Regulation (EU) 2016/2067 of 22 November 2016.
- [12] Kalinowska, B. (2015). *The Polish way to the European Union*. Wrocław: WSB Universities.
- [13] Krasodomska J. (2008) *The rationale for the diversity of accounting systems in the world*. Cracow: Science journal vol. 785 of the University of Economics in Cracow, pp. 45-50.
- [14] Lawrence S. (1996). *International Accounting*. London: International Thomson Business Press, pp. 1-13.

- [15] Mazurowska M. (2015). *Hedge accounting and risk management process in the enterprise*. Science journal of the University of Szczecin, vol. 873, pp. 385-392.
- [16] Napierała D., (2017) *IFRS 9 - another challenge for 2018*. Available at: <http://grant Thornton.pl/publikacja/mssf-9-kolejne-wyzwanie-na-2018-rok/>.
- [17] Nobes, C. and Parker R. (2000). *Comparative International Accounting*. Great Britain: Financial Times Prentice Hall, pp. 19–28.
- [18] Pielichaty E. (2016). *New requirements for the classification and measurement of financial assets*. Scientific work of the University of Economics in Wrocław, vol. 445, pp. 191-200.
- [19] PwC (2017). *Amendments to IFRS and reporting of public companies. A guide for the Audit Committee and prepare financial statements* [online]. [cit.2018-02-24]. Available at: <https://www.pwc.pl/pl/pdf/zmiany-w-mssf-i-sprawozdawczosci-spolek-publicznych-raport-pwc.pdf>.
- [20] *The Legal newspaper* (2018). Available at: <http://podatki.gazetaprawna.pl/artykuly/955183,od-2018-r-mssf-15-przewiduje-jeden-model-dla-wszystkich-branz.html>.
- [21] Świetla K. (2008). *The evolution of Polish accounting against the background of European Union solutions*. Cracow: Science journal vol. 785 of the University of Economics in Cracow.
- [22] Wasilewski M., Rusinkiewicz M. (2008). *Balancing law and IAS / IFRS in shaping the company's balance sheet*. Scientific journals of the Warsaw University of Life Sciences. *Economics and Organization of Food Economy*, vol. 61, pp. 39-54.

# Changes in Expenditure on Tourism in European Union Countries and Economic Development

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## **Abstract**

*Tourism is an area of the economy which importance has been growing for many years. Its development depends on civilization changes, economic growth and improvement of social conditions of societies. The aim of the article was to show the relationship between economic growth and expenditure on tourism in the European Union countries. The European Union as a unified organism on the one hand, and on the other hand a conglomerate of states with different levels of economic development seems to be a good object of research. Data from Eurostat and national data sources for 2000-2016 were used in the analyzes. The research used tools in the field of multidimensional statistical analysis. The results obtained indicate an increase in spending on tourist services, accompanied by an increased demand. The closer analysis indicates a decrease in average spending on trips abroad in many countries with different levels of development.*

**Keywords:** *economic development, European Union, expenditure on tourism, statistical analysis*

**JEL Classification:** *F63, Z13, Z32*

## **1. Introduction**

The importance of services in the economy is visible primarily in highly developed societies (Kiryłuk, 2014). I am talking here, of course, about the implemented internal demand for tourist services (Cole, 2001). Share of this type of services is conditioned on the appearance of two factors at the appropriate level. The first are financial resources - actually their excess, which can be used to meet the needs which are less important than the basic ones. The second condition is to have enough free time, which can be spent on the use of tourist services (Batyk, 2010). In addition, an appropriate surplus of funds leads to the implementation of tourist services abroad. Here, however, the benefits for the economy can appear on the side of real service providers (in the place of their implementation) and intermediaries. Quite often, tourist destinations involve poor, usually politically stable countries. The existing opportunities are often used by tourism organizers from richer countries with large financial resources necessary for the full implementation of the service. The benefits are, of course, mutual, both for the local economy (entities) and organizers (entities) from developed economies. Also in this case, through the tax system, the benefits for entities operating on the international arena go to the resident (sending) countries. Apart from the non-economic (cultural, historical, social) factors, changes in the demand for tourist services due to changes in economic factors should not only be perceptible, but in countries with similar characteristics should also go in a similar direction. In this respect, the study of these dependencies, i.e. the (economic) wealth measured with GDP

per capita and the demand for tourist services for the European Union countries seem to be justified (Tugcu, 2014).

## 2. The Specifics of the Tourist Services Market

In contrast to other types of services, the implementation of tourism services depends to a large extent on the geographical and natural conditions of the site. Development of tourism depends on factors that we can influence, like:

- quality of offered services,
- quality of infrastructure used in the process of providing services (Piechnik, 2012),
- price attractiveness of the services offered (Kot at al., 2012);

factors that we are able to predict relatively well, diagnose like:

- affluence of potential customers / consumers (Seetanah, 2011),
- customers' expectations regarding the offer,
- assessment (subjective) of the attractiveness of the place of service provision and its form;

and highly unpredictable factors like:

- subjective assessment of tourist values and quality of services,
- fashion,
- weather conditions (Cannas, 2012),
- political situation (Secăreanu at al., 2012).

The last of these factors plays a significant role primarily in politically unstable countries such as North African countries, however, the collapse of the market in this region in recent years has resulted in increased demand for services in Europe and the accompanying increase in prices and the emergence of new destinations and new market participants. In the presented study, however, we take into account the demand for tourist services treated as internal or external - with the exception of a precise European or non-European destination. The study uses the Charvat index, calculated as the number of nights in relation to the number of residents, and other based on the expenditure on tourist services and the number of trips.

As a basis, it was decided to compare changes in expenditures on tourist services in the years 2007-2016 in the European Union countries. For comparison, the data was presented in Euro according to the purchasing power parity in constant prices from 2010. We have data on both domestic and foreign trips and accommodation (Crouch, 1994). The latter seems to be more reliable, since the number of trips does not directly reflect the time spent abroad, which is associated with majority of costs (Bobáková, Chylková, 2016). The values of expenses for accommodation (total expenses by the number of overnight stays) were then compared with household expenditures.

## 3. Household Expenditure and Expenditure on Tourist Services

Assuming that expenditure on tourist services is a derivative of the wealth of the society, it seems reasonable to examine the relationship between household expenditure and expenditure on tourist services.

Out of 27 countries surveyed (there are significant data gaps for Luxembourg) there is a negative linear correlation between household expenditures and expenses for domestic trips in 10 cases. Only for Bulgaria the correlation was positive and statistically significant ( $r_{xy} = 0.722$ ;  $p = 0.028$ ). However, if we look at spending on accommodation, it will turn out that along with the increase in household expenses, the average spending on domestic

accommodation also increases more often. Positive and statistically significant correlation was observed for 11 cases and negative only for Sweden ( $r_{xy} = 0.790$ ;  $p = 0.020$ ) and Croatia ( $r_{xy} = -0.653$ ;  $p = 0.041$ ).

**Table 1: Value of Pearson Correlation Coefficients Between Household Expenditures and Expenses for Trips and Nights Domestic and Foreign in European Countries in 2007-2016 Years**

country	Domestic				Foreign			
	Trips		Nights		Trips		Nights	
	$r_{xy}$	P	$r_{xy}$	p	$r_{xy}$	p	$r_{xy}$	p
Belgium	- 0.807*	0.005	0.907*	0.000	- 0.411	0.238	0.565	0.089
Bulgaria	0.722*	0.028	- 0.658	0.054	0.832*	0.005	- 0.317	0.406
Czech Republic	0.587	0.074	- 0.455	0.186	0.634*	0.049	- 0.424	0.223
Denmark	- 0.768*	0.026	0.604	0.113	0.679	0.064	- 0.663	0.073
Germany	0.571	0.085	- 0.177	0.625	- 0.522	0.122	0.422	0.224
Estonia	- 0.878*	0.001	0.819*	0.004	- 0.631	0.051	0.771*	0.009
Ireland	- 0.549	0.100	0.550	0.100	- 0.874*	0.001	0.896*	0.000
Greece	- 0.902*	0.000	0.907*	0.000	- 0.806*	0.005	0.874*	0.001
Spain	- 0.595	0.070	0.648*	0.043	- 0.452	0.190	0.511	0.131
France	0.094	0.797	- 0.141	0.698	0.007	0.985	- 0.045	0.902
Croatia	0.131	0.718	- 0.653*	0.041	- 0.330	0.351	0.099	0.786
Italy	- 0.114	0.755	0.649*	0.042	0.314	0.376	- 0.337	0.341
Cyprus	- 0.392	0.514	0.535	0.353	- 0.610	0.081	0.791*	0.011
Latvia	- 0.131	0.718	- 0.239	0.507	0.815*	0.004	- 0.496	0.145
Lithuania	- 0.831*	0.003	0.834*	0.003	0.500	0.141	- 0.400	0.253
Luxembourg	-	-	-	-	- 0.449	0.193	0.462	0.179
Hungary	- 0.494	0.147	0.630	0.051	- 0.708*	0.022	0.874*	0.001
Malta	- 0.652	0.161	0.272	0.603	0.747*	0.033	0.780*	0.022
Netherlands	- 0.809	0.097	0.786	0.115	0.173	0.780	- 0.471	0.424
Austria	- 0.900*	0.000	0.919*	0.000	- 0.463	0.178	0.735*	0.015
Poland	- 0.530	0.115	0.432	0.212	- 0.579	0.080	0.620	0.056
Portugal	- 0.363	0.423	0.382	0.398	- 0.349	0.443	0.377	0.404
Romania	- 0.948*	0.000	0.966*	0.000	0.659*	0.038	0.522	0.122
Slovenia	- 0.256	0.475	0.250	0.485	0.340	0.336	- 0.542	0.106
Slovakia	- 0.951*	0.000	0.870*	0.001	- 0.843*	0.002	0.913*	0.000
Finland	- 0.647*	0.043	0.688*	0.028	- 0.342	0.333	0.761*	0.011
Sweden	0.580	0.132	- 0.790*	0.020	0.703	0.052	- 0.670	0.069
United Kingdom	- 0.923*	0.009	0.907*	0.013	- 0.913*	0.011	0.848*	0.033

\*significance at the level  $\alpha = 0.05$

Source: own elaboration on the basis of Eurostat data

In the case of expenses for trips abroad, it is not so clear. Exactly 5 out of 10 statistically significant correlations between the number of trips and household expenses turned out to be

positive. In the case of correlation with spending on accommodation, the situation is clear - all (10) statistically significant correlations indicated an increase in spending on foreign accommodation along with an increase in household expenses.

Obtained results are burdened with a certain error. It results from the fact of co-existence of all participants on the market (European / global) and formally their competitive "struggle". In connection with this, and in connection with changes in consumption in the European Union, the adjusted data on consumer expenditures was also used in analysis. To this end, average consumption expenditures was calculated for each year and then the amount of these expenses for each country were compared to the average. The resulting ratio was multiplied by spending and for each year, the amount of expenditure adjusted by the actual competition on the market of goods and services have been obtained. The expenses for accommodation were then referred to this value.

**Table 2: Results of the  $\beta$ -Convergence Study for Variables Determining the Demand for Tourist Services in European Union Countries in 2007-2016**

expenditure variable	Domestic			Outbound		
	$\Theta$	$\beta$	p	$\theta$	$\beta$	p
Trips per capita	-3.264	0.018*	0.003	-0.782	0.003	0.442
Expenditure per capita	-4.063	0.036*	0.000	-0.446	0.004	0.659
Night per capita	0.719	-0.003	0.478	-1.311	0.005	0.201
Expenditure per night	-1.383	0.018	0.178	-3.775	0.060*	0.001
Expenditure per trips	1.319	-0.006	0.199	-1.378	0.007	0.180

\*significance at the level  $\alpha = 0.05$

Source: own elaboration on the basis of Eurostat data

Assuming similar trends in the European Union, we should observe convergence in the scope of the studied phenomenon. If we look at the variables describing changes in the tourism services market, they should identify this phenomenon.

It turns out that statistically significant convergence is observed ( $\beta = 0.036$ ;  $p < 0.001$ ) in the case of expenditure per person on domestic tourism. Domestic demand in the EU countries is very similar and we can observe a kind of unification of its level at a rate of 3.6% per year. We cannot say the same about external demand ( $\beta = 0.004$ ;  $p = 0.659$ ). In this case, the only convergence concerns expenses per accommodation ( $\beta = 0.060$ ;  $p = 0.001$ ). This shows a relatively similar level of unit demand for tourist services (accommodation) in European countries. Here, the rate of reaching the hypothetical level of equilibrium is quite high and amounts to 6%. In terms of convergence, we also observe it for domestic trips per person ( $\beta = 0.018$ ;  $p = 0.003$ ). The frequency of trips per year, turns out to be more and more similar in the European Union, which is obviously an important information for market organizers.

#### 4. "Old" and "New" Union - a Comparative Analysis of the Demand for Tourist Services

It should be remembered that the European Union is not a monolith. We often find analyzes taking into account old EU members (15) - although due to the situation in some countries



(Spain or Greece) this is not always accurate - and new member countries (13) separately. In the case of presented analyzes, it also seems to be accurate.

**Table 3: Test Values for Two Averages for “New” and “Old” Union Members, Broken Down into Domestic and Outbound Nights, Trips and Expenditure (Per Capita)**

Year	Test statistics	Domestic			Foreign			Expenditures	
		Night per capita	Trip per capita	Expenditure per capita	Night per capita	Trip per capita	Expenditure per capita	Domestic	Foreign
2007	t	1.98	1.91	2.84*	1.90	1.85	1.61	-1.63	-2.57*
	p	0.06	0.07	0.01	0.07	0.08	0.12	0.12	0.02
2008	t	2.29*	2.16*	3.19*	1.98	1.93	1.88	-1.51	-2.35*
	p	0.03	0.04	0.00	0.06	0.06	0.07	0.14	0.03
2009	t	2.81*	2.79*	3.49*	1.89	1.86	2.20	-1.72	-2.74*
	p	0.01	0.01	0.00	0.07	0.08	0.04	0.10	0.01
2010	t	2.42*	2.18*	3.07*	1.92	1.90	1.71	-1.62	-2.43*
	p	0.02	0.04	0.01	0.07	0.07	0.10	0.12	0.02
2011	t	2.30*	2.19*	2.72*	1.96	1.83	1.68	-1.88	-2.64*
	p	0.03	0.04	0.01	0.06	0.08	0.11	0.07	0.02
2012	t	2.21*	2.17*	2.27*	1.64	1.70	1.72	-1.95	-3.13*
	p	0.04	0.04	0.03	0.11	0.10	0.10	0.06	0.01
2013	t	2.34*	2.09*	2.37*	1.73	1.77	1.41	-1.97	-2.83*
	p	0.03	0.05	0.03	0.10	0.09	0.17	0.06	0.01
2014	t	2.44*	2.26*	2.60*	1.45	1.59	1.38	-1.93	-2.86*
	p	0.02	0.03	0.02	0.16	0.13	0.18	0.07	0.01
2015	t	2.90*	2.63*	2.83*	1.40	1.43	1.24	-1.92	-3.12*
	p	0.01	0.02	0.01	0.18	0.17	0.23	0.07	0.01
2016	t	2.69*	2.44*	2.79*	1.62	1.62	1.27	-2.06	-2.73*
	p	0.01	0.02	0.01	0.12	0.12	0.22	0.05	0.01

\*significance at the level  $\alpha = 0.05$

Source: own elaboration on the basis of Eurostat data

The study covered average expenses in the countries of both groups, classified by domestic and foreign, and the frequency of accommodation and trips within the same classification. The years 2007-2016 were taken into account. It turns out that in the case of foreign trips, these differences are almost every time (except for 2009 - probably the effect of the crisis) irrelevantly different from each other. Differences, on the other hand, concern domestic trips in almost all periods (except for frequencies in 2007). In the countries of the old Union, spending for domestic tourism is almost 2.5 times higher than for the new 13 countries. The lack of differences in foreign spending is largely due to the globalization of the tourist services market and the need to adapt it to all customers on the one hand and keeping prices adequate to some costs on the other. In the case of internal market in each country, it is shaped according to separate conditions. Thus, differences in expenses - are adequate to the prices of services, but probably also to conditions. It should be remembered that an objective analysis indicates a significantly higher benefits on the part of the tourist services sector in the case of countries with higher per capita spending on these services. Even with proportional profits (which seems to be natural), revenues at higher turnover also increase. Expenditures on foreign tourist services in the new 13 countries is significantly higher than expenditures for domestic services

in all periods, while in the case of old 15 countries these differences are statistically insignificant. In proportional terms in the old 15 countries, on average foreign tourism per person is up to 90% more than on domestic trips, while in the old 13 countries even more than 200% and not less than over 114%.

The structure of expenses for domestic / foreign trips depends on the size of countries. The larger ones spend more on domestic trips. Smaller for foreign ones, as their demand for tourist services is usually greater than possibilities in both quantitative and subjectively qualitative way. This applies both to the EU countries in general terms and divided into two groups previously indicated. Changes in the structure in general are slight, but visible for individual countries. The largest of them is a 31% decrease in the share of domestic expenditure for Hungary and 28% for Poland and a 78% increase in internal expenditure on tourism in Denmark, 49% for Sweden and 38% for the Czech Republic.

**Table 4: The Number of Regions for Individual Countries Depending on the Average Rate of Change in the Number of Tourists in the Years 2002-2016 in Relation to the Number of Inhabitants**

Country:	Average rate of change				
	<-5.0%	-5.0%-0.0%	0.0%-5.0%	5.0%-10.0%	>10.0%
Belgium	-	3	7	1	-
Bulgaria	-	-	1	4	1
Czech Rep.	-	3	4	1	-
Denmark	-	3	2	-	-
Germany	-	4	31	3	-
Estonia	-	-	-	1	-
Ireland	-	-	2	-	-
Greece	-	-	12	-	-
Spain	-	3	14	-	-
France	-	-	22	-	-
Croatia	-	-	-	2	-
Italy	-	9	12	-	-
Cyprus	-	1	-	-	-
Latvia	-	-	-	1	-
Lithuania	-	-	-	-	1
Luxembourg	-	1	-	-	-
Hungary	-	-	6	1	-
Malta	-	-	1	-	-
Netherlands	-	1	11	-	-
Austria	-	1	8	-	-
Poland	-	-	11	5	-
Portugal	-	-	8	-	-
Romania	-	-	5	2	-
Slovenia	-	-	2	-	-
Slovakia	-	2	2	-	-
Finland	-	1	4	-	-
Sweden	-	-	8	-	-
United Kingdom	2	7	24	3	-
Total	2	39	197	24	2

Source: own elaboration on the basis of Eurostat data

It should also be mentioned that the distribution of tourists in the area of individual countries is not uniform and is also subjected to changes not always of a similar nature. Data presented in Table no. 1 indicate that in the years 2002-2015 the number of tourists decreased in 41 analyzed regions, including two in a significant way. These were the regions of Inner London and Cornwall and Isles of Scilly belonging to Great Britain. The decrease in the number of tourists affected the most regions in Italy (9) and the United Kingdom (9). In turn, the fastest growth - over 10% per annum - was recorded by two regions: Yugoiztochen (12.1%) and Lithuania (12.7%). Dynamic or very dynamic increases concerned 26 regions.

Situation in Polish regions looks definitely unfavorable in comparison with the rest of Europe. With regard to the Schneider index (number of tourists in relation to the number of inhabitants), 5 Polish regions from Poland (Lubelskie, Opolskie, Podkarpackie, Śląskie and Świętokrzyskie) are in the last ten regions of the Union. The number of guests is, however, not entirely legitimate to use, much more accurate seems to be the number of nights - Charvat's rate - but also in this case in the last tenth there are 5 Polish regions (Lodz, Lublin, Opolskie, Podlasie, Greater Poland). The situation is probably a result of low level of infrastructure development. Density indicator of the accommodation base indicates that half of weakest ten in the Union are Polish regions - Lodz, Lublin, Masovia, Opolskie and Silesia. Only Pomorskie, Zachodniopomorskie and Małopolskie rank in those lists in the middle or upper part of the ranking. Each tourist is, however, a client and every day of stay (overnight) is a measurable inflow of financial resources. Every foreign tourist without accommodation (de facto visitors) is a daily income of PLN 362, while the accommodation increases this income to PLN 916. It is not difficult to notice that the benefits of greater involvement in the service of tourist traffic allow to generate quite large revenues, some of which may be reinvested to increase competitiveness. The effect of this is clear.

Observed relation between the amount of expenditures in nominal terms and the size of the country seems to be a natural phenomenon - especially with a relatively balanced population - however connection with the amount of expenditure per capita - not necessarily. The study confirmed statistically significant positive linear correlations for the size of countries and the volume of national expenditures per capita in general and in the old 15 countries. This proves that in these countries all actions supporting domestic tourism lead to increased profits from this activity due to internal demand. As for the "new 13", there was a statistically significant negative correlation between the size of the country and expenditure per capita for foreign holidays. Thus, in this case, the size of the country, provides some potential alternative in the scope of offered tourist services, and thus hampers expenditure on trips abroad.

Theoretically, it might seem that the changes (increase) in tourism services 'expenditure are mainly determined by the increase in individual countries' affluence (Antonakakis at al., 2015; Kyjonková, 2014). However, the results of the regression equation survey - for particular countries - illustrating the amount of spending on domestic and foreign tourist services, show dependence on gross domestic product.

## 5. Conclusion

Presented research indicates clearly a permanent increase on the side of tourist traffic measured both by the number of overnight stays and trips. This increase is not equal within the European Union and in many cases we see differences between the so-called Old Union "15" and later adopted states of the new "13". It was also confirmed - in line with assumptions - that larger countries spend more on domestic trips. Expenditures on foreign tourist services are similar, however, in the case of domestic expenditure in 2007-2016, countries of the old Union spent 2.5 times more than countries of the new Union. Despite this, spending on foreign tourist

services is clearly higher in both groups than for domestic services. The increase in internal demand results in the automatic improvement of the entire balance in this respect and returns to the budget in the form of investments and taxes (Schubert, 2011). Observed directions of changes as well as the structure of expenditures indicate development of the analyzed sector. Dependence of growing demand on wealth is evident - not in all cases - however, it is not the only, though often probably the main, determinant of increase in demand for tourist services.

## References

- [1] Antonakakis, N. et al. (2015). How strong is the linkage between tourism and economic growth in Europe? *Economic Modelling*, 44, pp. 142–155.
- [2] Batyk, I. M. (2010). Wpływ potencjału turystycznego na atrakcyjność turystyczną wybranych regionów Polski. *Zeszyty Naukowe Uniwersytetu Szczecińskiego. Ekonomiczne Problemy Usług*, nr 52, pp. 45-56.
- [3] Bobáková, H.L., Chylková, M. (2016). The Development of Tourism in the Czech and Slovak Republics as the Result of European Integration Processes. In International Conference on European Integration. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 100-107.
- [4] Cannas, R. (2012). An Overview of Tourism Seasonality: Key Concepts and Policies. *AlmaTourism* N. 5, pp. 40-58.
- [5] Cole, S. (2007). The Regional Science of Tourism: An Overview. *Journal of Regional Analysis & Policy*, 37 (3), pp. 183-92.
- [6] Crouch, G. (1994). The Study of International Tourism Demand: A Review of Findings. *Journal of Travel Research*, 33(1), pp.12–23.
- [7] Kiryluk, H. (2014). Turystyka jako narzędzie rozwoju gospodarczego Unii Europejskiej. *Przedsiębiorczość i Zarządzanie*, t. 15, z. 8, cz. 1, pp. 137-154.
- [8] Kot, S. et al. (2012). Cena jako czynnik wpływający na wybór pakietów wakacyjnych przez klientów sektora turystycznego. *Marketing i Rynek*, R.19 nr 5, pp. 22-28.
- [9] Kyjonková, L. (2014). Regional Disparities and Cohesion in the EU. In International Conference on European Integration. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 417-424.
- [10] Piechnik, M. (2012). Aspekty infrastruktury regionalnej i jej wpływ na rozwój turystyki w makroregionie Polski Wschodniej w latach 2000-2010. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, nr 246, pp. 333-344.
- [11] Schubert, S.F. et al. (2011). The impacts of international tourism demand on economic growth of small economies dependent on tourism. *Tourism Management*, No. 32, pp. 377-385.
- [12] Secăreanu, C. et al. (2012). Factors influencing touristic demand and its modelling possibilities. *Procedia - Social and Behavioral Sciences*, 62, pp. 1184 – 1189.
- [13] Seetanah, B. (2011). Assessing the dynamic economic impact of tourism for island economies. *Annals of Tourism Research*, Vol. 38, No. 1, pp. 291–308.
- [14] Tugcu, C.T. (2014). Tourism and economic growth nexus revisited: A panel causality analysis for the case of the Mediterranean Region. *Tourism Management*, 42, pp. 207-212.

## Well-being in Poland and the Czech Republic as the EU Member States – Comparative Analysis

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### **Abstract**

*Relative to other European Union Member States, Poland's and the Czech Republic's performance across different well-being dimensions is mixed. Nevertheless, Poland and the Czech Republic highly improved their well-being outcomes after the accession to EU. When assessing the achieved level of human well-being, both material living conditions and quality of life have to be taken into account. The aim of this paper is to evaluate current state and progress in human well-being in two EU member states – Poland and the Czech Republic – with the use of comparative analysis. Attention is paid to conventional economic indicators measuring material living conditions, GDP per capita, disposable income and to indicators assessing the immaterial dimensions of citizens' quality of life. Moreover income distribution within societies and income inequalities are described as an essential part of measuring people's material well-being.*

**Keywords:** Czech Republic, European Union, income inequality, Poland, quality of life, well-being

**JEL Classification:** I31, I32, O15

### **1. Introduction**

English Oxford Living Dictionary understands under the term well-being *the state of being comfortable, healthy or happy* and considers terms *welfare, health, good health, happiness, comfort, security, safety, protection, prosperity, profit, good, success, fortune, good fortune, advantage, interest, prosperousness, successfulness* as its synonyms. Human well-being consists not only of individual well-being, but also of the social one. Therefore, well-being is attractive concept for scientists across wide range of social sciences – from psychology to economics. European Union Member States belong to economically developed countries with high quality of life and sustained progress in human well-being. However, existing disparities in well-being are evident in everyday life of individuals.

Poland and the Czech Republic joined with other eight states the European Union (EU) in 2004. Both countries were former socialist countries for which accession to the EU was a very important step in the process of economic transition. The Czech Republic and Poland are Central European countries as well as Slovakia, Hungary, Slovenia. Living conditions in the old EU Member States (EU15) are on average higher than in the EU Member States accessing

since 2004 (EU13). Presence of social and economic disparities at national as well as international level affect significantly fulfilment of the Europe 2020 Strategy and trajectory towards balanced and harmonious development (Poledníková, 2014). Despite existing large diversity in inequality patterns in EU Member States - revealing increases and decreases in inequality at the EU level (Stanickova, 2017) - EU membership is widely considered as the engine for socio-economic progress, and thus progress in individual and social well-being.

## 2. Problem Formulation and Methodology

In literature, well-being is defined in its multidimensionality covering key dimensions of material living conditions and immaterial quality of life. The most popular measures assessing inter-states differences in human well-being are Human Development Index and Happy Planet Index (Czech, 2016). The former one is commonly used especially when the progress in human well-being in developing countries is analysed because it covers only three essential dimensions of well-being: incomes, education and health status of the population. Therefore, it does not proof tiny nuances existing within these dimensions in developed countries. The latter measure contains shortcomings coming from the composite indicators used for its calculation (e.g. Ecological Footprint).

Report of Stiglitz, Sen and Fitoussi (2010) pointed out for the first time that if the well-being is assessed than its eight dimensions have to be taken simultaneously into account. These are material living standard, health, education, personal activities including work, political voice and government, social connections and relationship, environmental conditions, economic and physical insecurity. Since then, many researchers have paid attention to the formulation of composite indicators summarizing various aspects of individual and social well-being. Based on this report, OECD launched Better Life Initiative in 2011, introducing the Better Life Index, a composite measure evaluating eleven dimensions of well-being: housing, income, jobs, community, education, environment, government, health, life satisfaction, safety and work life balance (OECD [online], 2017). Chaaban, Irani and Houry (2016) developed the Composite Global Well-Being Index, spanning again several well-being dimensions, including: safety and security, health, education, housing, environment and living space, employment, income, life satisfaction, community and social life, and civic engagement. Recent researches focusing on well-being take into account its sustainability, for instance Mauro, Biggeri, Maggino (2018) presented a new approach of multidimensional measuring of well-being with the in-depth analysis of substitutability between different dimensions of well-being measures.

In this paper, our main objective is to evaluate current state and progress in human well-being in two EU Member States – Poland and the Czech Republic – with the use of comparative analysis. We focus on the period after the accession to the European Union to show the impact of European integration on well-being changes in these two countries. We plan to conduct the analysis of well-being in the period of the 1990s in our next paper and then to compare these results. The years covered typically range from 2004-2016 whenever possible. The question we ask here is precisely to what extent the Czech Republic (CZ) and Poland (PL) differ according to the level of income inequality and according to their achievements in selected dimensions of immaterial quality of life. We describe differences between PL and CZ, then we compare both countries with average European Union (EU28) achievements.

Based on current stage of research, we also apply multidimensional approach to the measurement, but we have no ambition to introduce our own composite measure in this paper. In contrast to this, we want to emphasize existing differences between the Czech Republic and Poland in comparison to European Union average. In our paper, we provide a comparison across a wide variety of well-being domains covering both material and quality of life

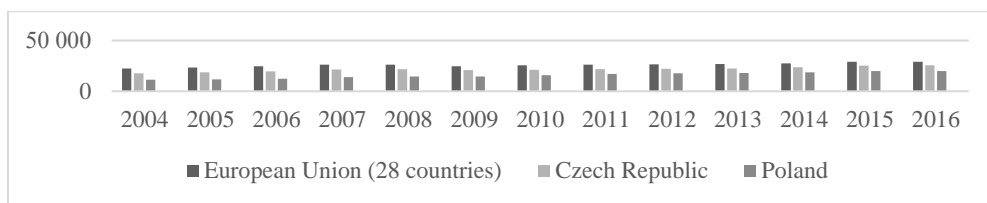
outcomes. Because of the limited size of the paper, we pay attention only to four dimensions of material well-being (GDP per capita, median equivalised disposable household income, housing conditions and income inequalities and poverty) and four immaterial dimensions of well-being (education, health, environmental conditions and personal security). We base our analysis on official statistical data reported by Eurostat, as well as on cross-sectional data collected at personal level within the framework of European Union – Statistics on Incomes and Living Conditions (EU-SILC) surveys, reporting self-evaluation of individuals' well-being.

### 3. Material Well-Being in Poland and the Czech Republic

#### 3.1. Incomes

Material well-being includes many dimensions like incomes and wealth. It is usually measured with GDP per capita and median equivalised disposable household income (Eurostat, 2013). Material living conditions also covers housing situation as well as income inequalities between people. All these measures are complementary to measure material well-being, because it is broader concept than only measuring economic production per capita (European Commission, 2009). According to EU and OECD suggestions to measure material well-being multilaterally, both GDP per capita and median equivalised disposable household income are analyzed in the paper (Eurostat, 2012).

**Figure 1: Gross Domestic Product at Market Prices, PPS per Capita in PL, CZ and EU-28 (average)**



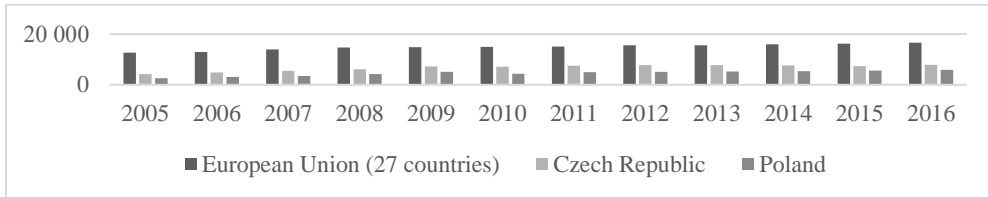
Source: own calculations on Eurostat

However GDP per capita alone is not enough to inform about people's well-being (Stiglitz, Sen, Fitoussi, 2010), it is traditionally used in official statistics to describe people's possibility to fulfil material needs (buy and use goods). GDP per capita increased in the period 2004-2016 in Poland, Czech Republic and the European Union average. The highest GDP per capita growth rate was in Poland (76%). It was more than two times higher in Poland than in European Union average (30%) and a half times higher than in Czech Republic (45%). Moreover GDP per capita did not decrease in Poland during the crisis. At the moment of joining the EU the GDP per capita in Poland was 50% of the EU average (one of the lowest among new member states), the same relation in Czech Republic was 78% (one of the highest among new member states). Twelve years after accession to European Union GDP per capita (as a % of EU average GDP per capita) was 87% in Czech Republic and 68% in Poland. The level of GDP per capita in Czech Republic in comparison to Poland was 1,5 higher in 2004 and 1,3 times higher in 2016. As a result the economic gap between these two countries is smaller as well as the gap between Poland, Czech Republic and EU on average.

### 3.2. Median Equivalised Net Income

Median equivalised disposable household income, which can be considered as the income available to the household for spending or saving, should be compared with country GDP measures when evaluating material well-being. Equivalised disposable income is an indicator of the economic resources available to a standardized household (adjusted for household size and composition so that the incomes of all households can be looked at on a comparable basis) (Eurostat, 2014).

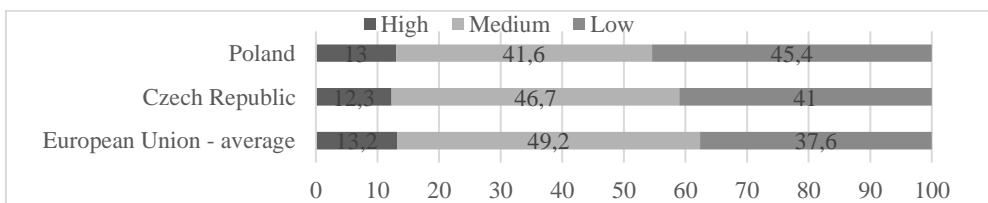
**Figure 2: Median Equivalised Net Income in PL, CZ and EU-28 average (in EUR)**



Source: own calculations on Eurostat

Relative to European Union average Poland’s and Czech Republic’s performance across the field of equivalised net income immediately after joining the EU was relatively poor. Although Poland is still among the countries with the lowest median income in EU, the highest rates of growth could be observed in this country in the period between 2005-2016 (PL 8,5%, CZ 6%, EU 2,5%). It should be noticed that as a result the gap between Poland, Czech Republic and EU average decreased. On the other hand the distance between analysed countries and EU average is much higher than when only GDP per capita is considered. Median income was only 20% of EU average in Poland and 33% in Czech Republic in 2004 and 35% of EU average in Poland and 47% in Czech Republic in 2016. The difference in these two dimensions is very significant and proves the necessity of measuring material well-being from different angles.

**Figure 3: Percentage of the Population in Poland, Czech Republic and EU-28 in 2013 Rating Their Satisfaction as High Medium or Low**



Source: own calculations on Eurostat

Material living conditions are important determinants of well-being in that they affect individuals and households choices and everyday lives. Although the objective living conditions are strongly related to the subjective assessment of the financial situation, the results of the EU study for Poland show higher level of satisfaction than could be expected given its objective living conditions. There is relatively high share of the population in Poland rating their material satisfaction high, but there is also much higher share of the population than in Czech Republic or EU rating their material satisfaction low (Fig.3). Moreover, the subjective assessments of the financial situation seem to be comparable between Poland and Czech Republic despite their relatively high gap in objective material well-being.



### 3.3. Housing Conditions

Housing is a major component of household's budget. Analysing housing conditions are the important aspect of measuring material well-being, because they are strongly related to incomes.

The average number of rooms per person has risen over the past decade in Poland and the Czech Republic but is still below the EU average in both countries. It was 1,4 room per person in the Czech Republic and 1,1 room per person in Poland in 2016. Housing affordability worsened significantly between 2005-2010 in the Czech Republic but has remained stable in recent years. In comparison, housing affordability has worsened in recent years in Poland, standing slightly below the EU average in 2016. The percentage of people living in dwellings without basic sanitary facilities has been cut by one-third since 2005 in the Czech Republic and has been reduced by almost a half in Poland in the same period.

In sum, with the increase of GDP per capita and equivalised household income, housing conditions improved both in Poland and Czech Republic but are still below the EU average in many aspects.

### 3.4. Inequalities and Poverty

While median disposable income provides a measure of the typical living standards, devoid of the potential distortion of aggregate measures such as GDP per capita, it still fails to offer the complete picture. Measures of the distribution of income across various economic strata are also needed to depict the extent of economic inequality (Eurostat, 2014, p. 23). Income distribution within societies, income inequalities and poverty are an essential part of measuring people's material well-being, because social exclusion is not dependent on income and poverty only. Accessibility to decent material living conditions, financial security, such as the ability to face unforeseen risks, as well as participation in the economic and social life, are factors which, although often interdependent with income, have to be taken into account. Therefore a more holistic statistical indicator is used to evaluate the material well-being. AROPE, standing for 'at risk of poverty or social exclusion' indicates the number of persons who are (i) either at risk of poverty (as indicated by their disposable income); or (ii) face severe material deprivation (as gauged on accessibility to a standard, objective set of material items); or (iii) live in a household with very low work intensity. 'People at risk of poverty or social exclusion' is one of the best examples of a synthetic indicator; it concerns mainly the dimension 'material living conditions' (Eurostat, 2012).

**Table 1: Gini Coefficient and People at Risk of Poverty and Social Exclusion in Poland, Czech Republic and European Union in 2005 and 2016**

Country	Gini coefficient			People at risk of poverty and social exclusion		
	2005	2016	Change (%) 2005-2016	2005	2016	Change (%) 2005-2016
<b>Poland</b>	35.6	29.8	- 16.0	45.3	21.9	- 51.7
<b>Czech Republic</b>	26.0	25.1	- 3.5	19.6	13.3	-32.1
<b>EU-27</b>	30.6	29.8	- 2.6	25.8	23.6	-8.5

Source: own calculations on Eurostat

As can be observed in Table 1 the level of inequalities in Poland and Czech Republic were very different after the accession to European Union. Inequalities (measured by Gini coefficient) and poverty (measured by people at risk of poverty and social exclusion) were an area of comparative weakness in Poland in 2005. Contrary to Poland, these material well-being dimensions were better in Czech Republic than in Poland in 2005 as well as in 2016. The sub indicators: at risk of poverty rate and the rate of severely materially deprived people are twice as high in Poland (17,1% and 11,9%) as in Czech Republic (8,6%, 6,6%) in 2016. It is worth to notice, that the percentage change in inequalities was 16% in Poland and 3,5% in Czech Republic in the period 2005-2016 (measured by Gini index). The distance between two countries decreased as a result of these changes. The last decade has been a turbulent time for several aspects of inequalities and poverty in Poland and Czech Republic but still Czech Republic is much better than.

Conclusions of comparative analysis of selected material well-being measures state that material well-being was higher in Czech Republic than in Poland at the moment of joining the European Union and in 2016. The GDP per capita and disposable income are still lower in both analysed countries than EU-average. Taking into consideration inequalities and poverty the situation improved dramatically especially in PL and is better or quite the same as the EU-average in 2016. The Czech Republic's performance across inequalities and poverty is much better than Poland's and European Union's average both in 2005 and 2016.

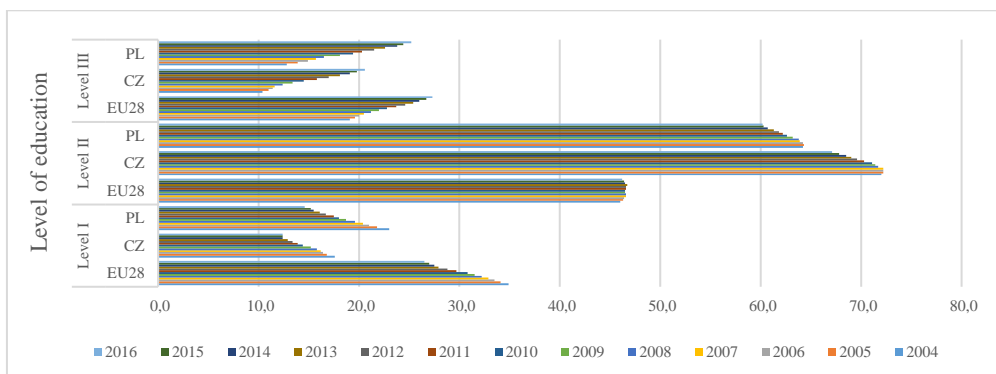
#### **4. Immaterial Quality of Life in Poland and the Czech Republic**

Employability, thus incomes and material wealth have significant impact on human well-being, therefore economists usually pay attention to these categories when assessing socio-economic situation in certain country. However, individuals, as well as policy makers, becoming more aware that immaterial factors also contribute to individual and social well-being. Unfortunately, incomes, wealth and immaterial domains of well-being are closely interconnected.

##### **4.1 Education**

Education is a key element influencing people's skills and competencies and thus their earnings and life-evaluation (Stiglitz, Sen, Fitoussi, 2010). Analysis made by OECD ([online], 2011, p. 20-24) reveal interrelation between attained level of education and other important domains of the well-being: *Better educated individuals earn higher wages and have a higher probability to have a job. Better educated individuals also participate more actively in politics and in the community life, they commit fewer crimes and rely less on social assistance.* In Poland and the Czech Republic, the increasing number of individuals attained the tertiary education, and at the same time decreasing number of individuals attained only lower than secondary education, have been evident since their accession to the EU in 2004 (Fig. 3).

**Figure 4: Population in PL, CZ and EU28 by Educational Attainment Level (in %)**



Source: own calculations on Eurostat

Note: Level 1: Less than primary, primary and lower secondary education; Level 2: Upper secondary, post-secondary but non-tertiary education; Level 3: Tertiary education.

In Poland, more people have a university degree than in the Czech Republic. In 2004, the gap between PL and CZ counted for 2,4 p.p., and for 4,6 p.p in 2016. In contrast to the widening gap between the share of population with tertiary education between PL and CZ, the gap between CZ, PL and EU28 has been narrowing since countries’ accession to the European Union (Table 2).

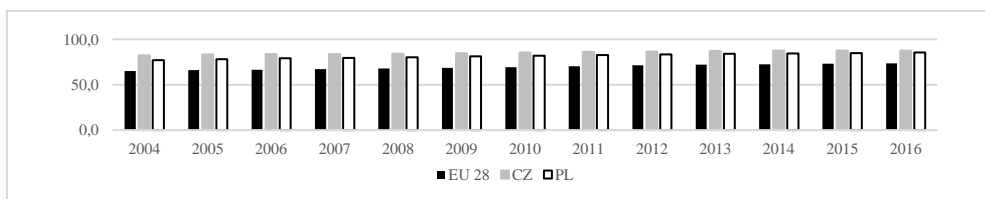
**Table 2: Population in PL, CZ and EU28 with Tertiary Education (in %)**

Country	2004	2015	Change 2004-2015 (in p.p.)
EU28	19.1	26.7	7.6
CZ	10.4	19.8	9.4
PL	12.8	24.4	11.6

Source: own calculations on Eurostat

However, if only two levels of attained education are observed (below the upper secondary versus upper secondary and above), the Czech Republic is the best performing unit. More individuals reached at least upper secondary education in the Czech Republic than in Poland and EU28 (Fig. 4).

**Figure 5: Population in PL, CZ and EU28 with at Least Upper Secondary Education (in %)**



Source: own calculations on Eurostat

OECD data (2017) confirms that attained level of education has significant relation to individuals' earnings. If the relative income of those with upper secondary education is equal to 100, then income of those with:

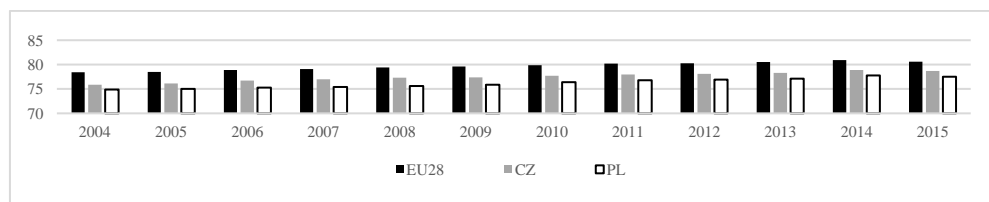
- tertiary education is equal to 148 in CZ (in the year 2015) and 141 in PL (in the year 2014), and
- attained education below the upper secondary level is 84 in CZ (in 2015) and 86 in PL (in 2014).

#### 4.2 Health and Health Status

Health is a basic feature influencing the length and overall quality of people's life. Surveys made in many countries consistently found that people put health status, together with jobs to the top of what affects their living conditions. Similarly to education, health status is interrelated with other domains of well-being – having a good job, adequate income, participating on society's life, education, etc. (OECD [online], 2011).

Life expectancy at birth is typically observed in the inter-country comparison. Brief comparison of the level of life expectancy at birth in the Czech Republic and Poland reveals significant difference. In the Czech Republic, on average, length of individuals' life is higher than in Poland, the gap is constant, counted for about 1 year (Fig.5).

**Figure 6: Life Expectancy at Birth in PL, CZ and EU28 (in years)**



Source: own calculations on Eurostat

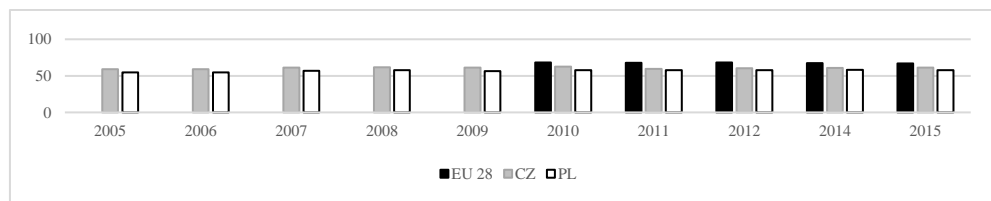
In Poland and the Czech Republic, life expectancy is lower than the EU28 average. Any significant convergence between CZ, PL and EU28 is not evident, although observed units experienced increasing life expectancies at birth (Table 3).

**Table 3: Life Expectancy in PL, CZ and EU28 with Tertiary Education (in years)**

Country	2004	2015	Change 2004-2015
<b>EU28</b>	78.4	80.6	2.2
<b>CZ</b>	75.9	78.7	2.8
<b>PL</b>	74.9	77.5	2.6

Source: own calculations on Eurostat

Czech individuals also feel more healthy than the Polish ones when their self-perceived health status (Fig. 6) monitored by Eurostat in EU-SILC surveys is taken into account. However, subjective feelings are worse than the EU28 average.

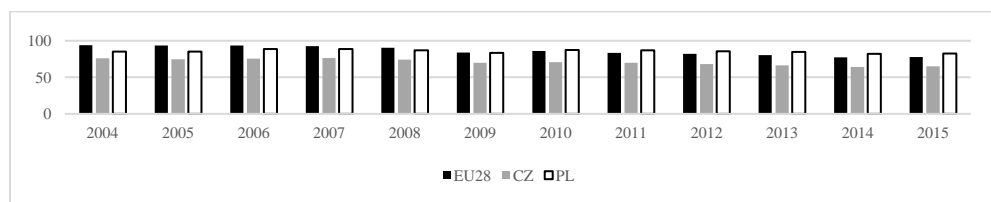
**Figure 7: Self-Perceived Health: Percentages of Population Judging Their Health as Very Good or Good in PL, CZ and EU28 (in %)**

Source: own calculations on Eurostat

### 4.3 Environmental Conditions

Environmental conditions have immediate and long-term impact on individuals' quality of life. They are associated with the sustainability of human's production and consumption. This influence is direct and indirect. Direct impact are observed through existing air and water pollution, while indirect one through changes in water cycles, losing biodiversity and finely through climate changes.

Greenhouse gas emissions are responsible for existing air pollution in European countries. Following European Union's and international commitments concerning the environmental protection, Poland and the Czech Republic have implemented new environmental policies. They have encourage the use of greener technologies in their industrial production and people's consumption. Therefore, since 1990 decreasing greenhouse emissions are evident in CZ and PL, as well as in the whole the European Union (Fig. 7).

**Figure 8: Greenhouse Gas Emissions in PL, CZ and EU28 (in CO<sub>2</sub> equivalent, base year 1990 = 100)**

Source: Own calculation on Eurostat

Progress in elimination of greenhouse gas emissions has been more significant in the case of EU28 than in the case of CZ and PL. However, the Czech Republic is the most successful due to fast structural shift (Table 4).

**Table 4: Greenhouse Gas Emissions in PL, CZ and EU28 (in CO<sub>2</sub> Equivalent, Base Year 1990 = 100)**

Country	2004	2015	Change 2004-2015
EU28	94.04	77.88	-16.16
CZ	75.83	64.90	-10.93
PL	85.20	82.76	-2.44

Source: own calculations on Eurostat

Despite decreasing air pollution, Czech people feel to be more disturbed by pollution, grime and other environmental problems than the Polish ones. In 2005, 19,8% of Czech respondents taking part EU-SILC survey felt disturbed by such problems, while only 13,8% of Polish respondents. In 2015, still less Polish respondents (10,5%) considered environmental problems to disturb them than the Czech ones (13,8%).

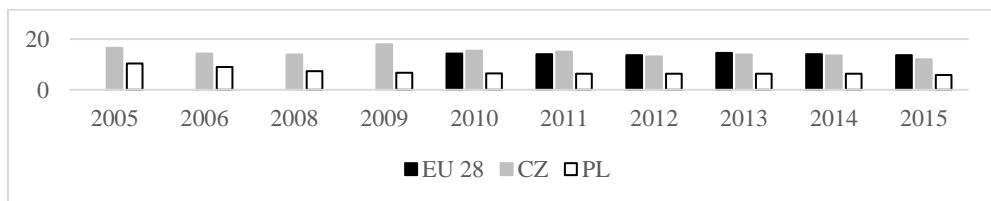
#### 4.4 Personal security/insecurity

Stiglitz, Sen and Fitoussi (2010) suggested taking into account external factors such as crime, accidents, natural disasters and climate change when the attention is paid to personal security/insecurity in quality of life analysis. Being afraid of crime has important impact on self-reported well-being status. Crime may lead to loss of life and property, as well as engendering physical pain, post-traumatic stress and anxiety (OECD [online], 2011, p. 32).

It is impossible to base assessment of personal security on official data, because they are not fully comparable across EU Member States. However, OECD analysis confirms that socio-economic inequality measured by incomes and education seems to play a central role in the occurrence of criminal victimization. This phenomenon can be explain with fact that economically disadvantaged people are likely to life in city/towns' districts with lower housing prices but with high criminality and with the lack of the resources enabling them to protect themselves against crimes.

Personal security assessment is based on self-reported status of individuals in most studies. For instance, EU-SILC surveys monitor the share of people perceive crime, violence and vandalism as a problem in the area where they live in. In this field, significant differences between CZ and PL are evident. More respondents feel to be afraid of crime in the Czech Republic than in Poland (Fig. 8).

**Figure 9: Share of People Who Perceive Crime, Violence and Vandalism as a Problem in PL, CZ and EU28 (in %)**



Source: Own calculation on Eurostat

In the Czech Republic, Poland and in the whole European Union declining share of people receiving crime and violence as a problem is evident. However, subjective feeling of personal insecurity is the lowest in Poland.

## 5. Conclusion

The European strategy aims at creating a socially inclusive society and increasing the quality of life of citizens (Eurostat, 2015). Poland and the Czech Republic improved their performance in material and immaterial well-being after the accession to EU. The analysis conducted in the paper proves high importance of multidimensional measuring well-being and showed the diversity between Poland and the Czech Republic according to different dimensions of material living conditions and quality of life. The article highlights the many faces of well-

being, showing the different dimensions of material and immaterial well-being measures. In according to material aspects it covers incomes, inequalities and poverty problems. Our results show that Poland and the Czech Republic had different patterns in terms of different dimensions of material and immaterial well-being.

In the period after accession to European Union the standard of living and quality of life improved. The improvement in material well-being can be observed both in Poland and Czech Republic. The Czech Republic is performing better than Poland in material living conditions and inequalities. Despite the fact that incomes were growing faster in Poland than in the Czech Republic, the level of material well-being (in different dimensions) is still higher in the Czech Republic than in Poland.

The decrease in inequalities and poverty can be observed in these two countries which resulted in better or the same level of material conditions (in inequalities and poverty) as in the EU on average. The reason may be connected with the European cohesion policy which aimed in increasing the material living conditions across the poorest regions in EU. Poland and Czech Republic are both characterized by lower incomes than EU average but the gap between Poland and Czech Republic declined, as well as the gap between Poland, Czech Republic and the EU average in the analysed period.

Material living conditions have significant impact on quality of life in immaterial terms. Therefore, slight differences between Poland and the Czech Republic exist also in analysed dimension of the quality of life. Both countries have made real progress since their entrance to the European Union in all observed dimensions of immaterial well-being and thus EU membership has positive impact on socio-economic development in both countries. However, on average, the Czech Republic performed better than Poland, in some case also better the EU average performance was.

We consider topic of material and immaterial well-being as actual and attractive with the optics of EU cohesion, therefore our further research will be focused on identification of the reasons of differences in defined domains of well-being in EU Member States accessing since the year 2004. We also plan to analyse the the EU membership countries' progress in this field.

## References

- [1] Chaaban, J., Irani, A. and Khoury, A. (2016). The Composite Global Well-Being Index (CGWBI): A New Multi-Dimensional Measure of Human Development. *Social Indicators Research*, vol. 129, iss. 1, pp. 465-487.
- [2] Czech, K. (2016). Europe 2020 Targets as Life Quality Measures in a Global Economy – An Attempt to Evaluation based on the Example of Poland. In *16th International Scientific Conference Globalization and its Socio-economic Consequences*. Zilina: University of Zilina, pp. 345-353.
- [3] English Oxford Living Dictionaries (2017). *Well-Being*. [Online]. [cit.2017-06-01]. Available at: <https://en.oxforddictionaries.com/definition/well-being>.
- [4] European Commission (2009). *GDP and beyond — Measuring progress in a changing world* (COM(2009) 433) [Online]. [cit.2018-02-20]. Available at: [https://ec.europa.eu/eurostat/cros/system/files/06\\_GDP%20and%20beyond.pdf](https://ec.europa.eu/eurostat/cros/system/files/06_GDP%20and%20beyond.pdf).
- [5] Eurostat (2012). *Measuring Progress, Well-being and Sustainable Development* [Online]. Available at:

- <http://ec.europa.eu/eurostat/documents/7330775/7339383/Measuring-Progress-Well-being-sustainable-development/ef61b63c-02f0-4aa6-8155-42fdc0833018>
- [6] Eurostat (2014). *Living conditions in Europe* [Online]. [cit.2018-02-24]. Available at: <http://ec.europa.eu/eurostat/documents/3217494/6303711/KS-DZ-14-001-EN-N.pdf/d867b24b-da98-427d-bca2-d8bc212ff7a8>.
- [7] Eurostat (2015). Quality of life. Facts and views [Online]. [cit.2018-02-22]. Available at: <http://ec.europa.eu/eurostat/documents/3217494/6856423/KS-05-14-073-EN-N/742aee45-4085-4dac-9e2e-9ed7e9501f23>.
- [8] Eurostat (2017). *Eurostat Database* [Online]. [cit.2018-01-10]. Available at: <http://ec.europa.eu/eurostat/data/database>.
- [9] Mauro, V., Biggeri, M., Maggino, F. (2018). Measuring and Monitoring Poverty and Well-Being: A New Approach for the Synthesis of Multidimensionality. *Social Indicators Research*, Vol. 135 (1), p. 76.
- [10] Organisation for Economic Co-operation and Development (2011). Compendium of OECD well-being indicators [Online]. [cit.2017-12-30]. Available at: <http://www.oecd.org/std/47917288.pdf>.
- [11] Organisation for Economic Co-operation and Development (2017). How's Life? Measuring well-being. [Online]. [cit. 2018-01-12]. Available at: [http://www.oecd-ilibrary.org/economics/how-s-life-2017\\_how\\_life-2017-en](http://www.oecd-ilibrary.org/economics/how-s-life-2017_how_life-2017-en).
- [12] Organisation for Economic Co-operation and Development (2017). *OECD.Stat* [Online]. [cit.2017-12-30]. Available at: <http://stats.oecd.org/>.
- [13] Poledníková, E. (2014). Evaluation of Czech Regional Development in the Context of the EU Cohesion. In *Proceedings of the 2nd International Conference on European Integration*. Ostrava: VŠB-Technical University of Ostrava, pp. 572-580.
- [14] Staničková, M. (2017). Can the implementation of the Europe 2020 Strategy goals be efficient? The challenge for achieving social equality in the European Union. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, vol. 12, iss. 3, pp. 383-398.
- [15] Stiglitz, J., E., Sen, A. and Fitoussi, J-P. (2010). *Report by the Commission on the Measurement of Economic Performance and Social Progress* [Online]. [cit.2017-05-25]. Available at: <http://ec.europa.eu/eurostat/documents/118025/118123/Fitoussi+Commission+report>.



## **Directions of Development and Marketing Goals of Polish Service Companies in the EU Internal Market in Aspect of Internationalization**

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### **Abstract**

*This article discusses issues related to the operation of service companies in Poland in the Silesian Voivodship, taking into account their development directions and the most important goals that companies undertake to meet market requirements and improve their market position, taking into account their aspirations to operate on EU market. The author presents the results of research conducted among enterprises in the Silesian Voivodship in which the aim is to depict the motives and ambitions of enterprises wishing to maintain their stabilization on the market and develop their functioning, especially in European Union, in order to gain more clients as well as to build a competitive advantage in the business environment. In the article, the author concerns the advantages coming from the functioning of enterprises in The Internal Market, as well as potential drawbacks which force the entrepreneurs to think globally not only locally if their aim is to stay competitive.*

**Keywords:** *european businesses, internal market, internationalization, marketing, management, service enterprises*

**JEL Classification:** *011, 012, 019*

### **1. Introduction**

The process of internationalization of business activity becomes an important element affecting the functioning of the enterprise in the demanding conditions of the international environment. It plays a huge role in modern entrepreneurship, has an impact on building business strategies and in general, accompanies the ongoing changes in the economic sphere. Nowadays, entrepreneurs have better access to knowledge about foreign markets, and hence, greater opportunities and the chances for these markets to enter with a product and/or a service. Awareness of the business environment supports contemporary internationalization processes, which become an indispensable way to compete with other entities and can be a factor stimulating production growth and thus a factor increasing profits. Both strategic management in enterprises, as well as and internationalization strategies are the foundation of the company's development and orientation to foreign markets. Significant, therefore, is the exploration of approaches and strategic management processes that determine enterprises to expand in connection with internationalization strategies, its instruments and sources, as well as, the key determinants and trends prevailing in the contemporary realities of business management in global conditions. This article aims to examine issues related to the functioning of enterprises in the international environment. First of all, there is a need to define the concept of internationalization and the aspect of functioning companies in EU market. This market is

called The Internal Market (the author uses the acronym IM) as its main objective is to assure that all members of EU have the equal rights in the economic sphere and the conditions of running the business are very much the same in the whole area of EU. Thus, the author suggests regarding IM in terms of a variety of peoples, cultures, and lifestyles which determine demand, customers' expectations, and economic trends. From the EU point of view, 28 members cannot distinguish between German, Irish, Czech or Lithuanian markets as there exists only one common market with the free and undisturbed flow of people, goods, and services. However, for instance, for Polish entrepreneur IM still will show diversity due to the fact that operating in Malta, Italy or Estonia, or any other EU country will be different as different are the people, their needs, exiting trends, clients' wallet wealth, own resources, or even such basic issues as climate or geographical location. In such case, IM may be regarded as the international business environment in which entrepreneurship can be discussed in terms of internationalization. The author, therefore, focuses on discoursing on external and internal factors affecting the functioning of enterprises in international conditions. This includes discussion on the international business environment as the factor influencing strategic decisions, management orientation, and what is more, the key determinants defining the major marketing goals or/and directions of development of the companies (Pabian, Bylok and Kucęba, 2011). Specifically and particularly, the article focuses on service companies and their opportunities to gain benefits from functioning in IM or obstacles that may exist in this matter. If one would consider IM as the convenient and full of business chances field, the companies running their business in different EU countries should bring a number of profits. The question then arises whether the service companies obtain such benefits in the same way as the production or trade entities? And what is more, what are their expectations or how they find themselves in these conditions? Thus, the author of this paper analyses, on the one hand, the level of internationalization of service companies and, on the other hand, their outlooks in terms of profit and loss.

## **2. Problem Formulation and Methodology**

Prerequisites for starting enterprises in the context of the international environment may derive from specific objectives and directions which each company may expect. In order to verify what inclines the Polish service initiatives to go beyond the home market and function in other EU countries, and what the entrepreneurs assume as the opportunity of development, an appropriate study has been conducted. The study was made in 2016 among the Polish companies of various forms of business in the Silesian Voivodeship. It was based on the questionnaire (CAWI and CATI techniques) among 100 entities. In the research sample, there were selected 74 companies which remain as service companies or companies joining services with production and/or trade. Data obtained in the survey and analyzed allowed for drawing key conclusions. The empirical part of the article has been preceded by a deep scientific literature study. The author's aim is to indicate that the international business environment has a significant impact on strategic decisions taken by the entrepreneurs and that in case of service companies foreign markets may become a chance of business development or they may be seen as the limit the companies are not able to exceed. A hypothesis was made that Polish service companies are orientated towards specific goals and development directions allowing obtaining the largest possible number of benefits resulting from the membership in The Internal Market. The results of the research and conclusions may be regarded as the basis for further studies.

### 3. General Aspects of Internationalization

Nowadays, the challenge for entrepreneurs is to function in an international environment, which for many business entities will be an opportunity to gain new sales markets, new clients and making good business relationships. Developing activities abroad may become an asset of the company and effectively strengthen its position in the home country, generate much higher income and improve management skills, which in fact brings huge benefits for the state market economy in the economic dimension, as well as in the political dimension, because presence companies in foreign markets also becomes the showcase of the country from which the company comes. If the company establishes relations with entities outside of its own country, which according to Z. Pierścionek (2003) means "*every form and scope of connections between its various activities with foreign markets*" or, when the company extends production, sales, and additional activities, including research and development works on foreign markets, we are dealing with the internationalization of the company (Jarosiński, 2012). The simplest and original form of internationalization of enterprises is export and import, and the most advanced step is a thorough transfer of production abroad (Pietrasieński, 2005). There exists a number of scientific theories and related topics with the activities of enterprises in the international environment. The theoretical basis for internationalization of the enterprise includes the theory of the technological vulnerability (Rymarczyk, 2004, D. Ricardo, 1951) which assumes that those states gain which engages resources in the production of the selection and services where they have the advantage of the product lifecycle. R. Vernon (1996, 1971) in his theory of international trade suggested the mechanism in which the company first builds up the power of export, then the production begins abroad, next the production is gaining competitive position and finally the competition occurs in the import of the home market (Świerkocki, 2011). According to B. Ohlin (1993), countries will strive to specialize in the production of these goods and services for which they could use their own resources. Furthermore, the theory of cost comparative (Kojima, 1982, Budnikowski, 2003) was based on the supposition that the benefits of the international exchange of goods and services are bilateral when on the side of one of the exchange partners there are significantly lower costs of production of goods. Another concept was developed in the theory of monopoly advantage (Hymer, 1970) suggesting that if there exists any international exchange, it is conditioned by the possibility of using foreign monopoly advantage, for example, due to lower production costs abroad than in the home country (Kosińska, 2008). It is also worth mentioning the theory of currency areas which was proposed by R.Z. Aliber (1976, 1984) who claimed that the differentiation of prices and exchange rates in each country, the size of the market and the costs of starting up foreign operations affect the essence and mechanisms of internationalization. A. Buckley's (2002) (the real option theory) suggested the use of the assets of the company in internationalization for example, for export, franchising or licensing, in which a company partner closer to the foreign market will be able to efficiently and properly determine the opportunities and options for the implementation of selected projects. However, a company with direct investments and thus direct access to the foreign market can independently and better identify and assess opportunities and options profitable from the point of view of undertaking projects. The fundamental issue of the theory is to estimate the maximum net current value of direct investments, taking into account the actual options for each form of internationalization (Bowman and Moskowitz, 2001). In addition, the eclectic theory of foreign direct investment is also distinguished, indicating the need for three reasons for undertaking an operation on foreign plaster: an advantage over others, using advantage for themselves and not for others through the sale of a license or its lease, and easy access to the market, favorable location (Witek-Hajduk, 2010). Theories in various ways draw attention to the factors or prerequisites for enterprises to make decisions about internationalization. It is impossible to ignore in these considerations, the network theory, which defines the company as a fragment of a larger whole,

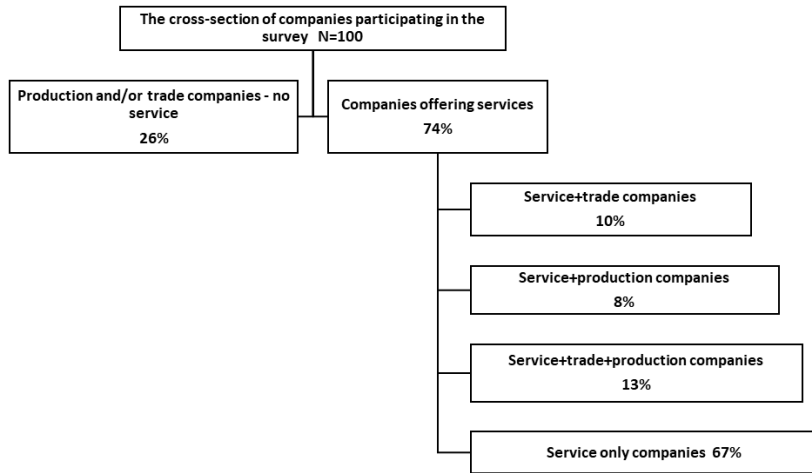
a system in which all involved interact with each other, are interrelated. Enterprises in the network remain in vertical relations within the adopted value chain, and in horizontal relations with competitors. In a more advanced network model, relationships with the business environment reach, for example governmental institutions, financial institutions or companies involved in advertising campaigns. The above theories have become the basis for developing models and levels of internationalization of enterprises, strategies, and methods of entering foreign markets used by enterprises oriented towards internationalization processes. In modern times globalization processes are naturally present in the activities of enterprises regardless of their size. Businesses that are active and developing in terms of consumer expectations are fully aware that the modern consumer "thinks globally" and expects access to products from around the world. Therefore, the company should naturally expand its business in such a way as to meet the diverse and complex needs of consumers. One of the ways to enrich the offer is, precisely, cooperation with a foreign entrepreneur or direct access and activity on foreign markets to meet the expectations of foreign markets consumers and / or simultaneously at home in the country (Chrzan and Kowalski, 2009, Fojtiková, 2013, Ślusarczyk, 2013, Baláž, 2014). In the course of internationalization, it is worth focusing on the factors and motives affecting and conditioning a range of activities undertaken by enterprises, especially service ones. From many different factors, the way of internationalization of enterprises and the undertaken action strategies on foreign markets, both those existing inside companies and external factors, including the international environment, which enterprises must consider taking into account and achieving competitive advantage in other countries will depend on. Themes of internationalization of operations are basically similar to the motives of the enterprise functioning in national conditions. However, while a company operating solely in its own country should take into account the national environment, a company oriented to foreign markets must take into account not only the national environment, but also the international environment. Some motives will opt for the realization of high profits, but others will initiate conditions so that profits can be achieved at all. The motives for the internationalization of enterprises can be comprehensively divided into economic, market and legal (Wiktor, 1998, Magdolenová, 2010, Madzinová, 2016). It is impossible to omit matters related to border crossing and internationalization in today's economic activity, because it is not the prevailing trend but a real determinant of competitiveness and attractiveness, as well as a measurable success factor. Often a specific exhaustion of demand for products on the domestic market, as well as strong competition, especially from corporations and large foreign networks, forces enterprises to look for other markets abroad, hence the phenomenon of internationalization of economic activity is an alternative and sometimes a necessity for the company to maintain its position market. In the situation in which Polish enterprises are found through the prism of the EU market, The Internal Market gives great opportunities to expand to EU countries due to unified regulations and the free flow of people, goods and services. However, the IM also opens the country and causes a larger and unlimited influx of EU competitors. The service companies such realities may find stimulating or/and problematic.

#### **4. The Results of the Study**

The research included 100 companies of the Silesian Voivodeship. The cross-section of companies participating in the study includes both medium and micro enterprises as well as small and large enterprises employing over 250 people. The vast majority of companies operate without foreign capital (95%). Two companies pointed to the presence of foreign capital in the range from 1% to 20%, and three in the range from 21% to 50%, which is 2% and 3% respectively. There were not recorded any companies with over 50% of foreign capital. There were 74 companies which offer services in their business and 26 companies which have

no services at all. The detailed cross-section of companies participating in the survey is presented in Figure 1.

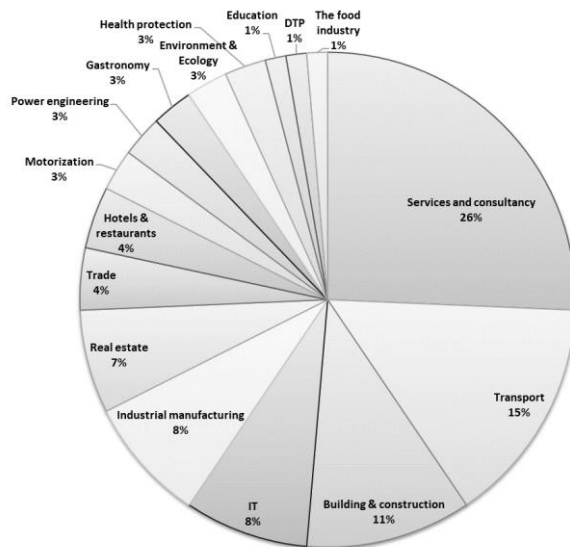
**Figure 1: The Cross-Section of Companies Participating in the Survey N=100**



Source: Own elaboration (2018)

As it can be seen in Figure 1, the majority (74%) of all surveyed companies are the entities offering services, among which 67% of companies offer only services and the rest combine services with trade or production. Due to the purpose of the paper, the following results will only refer to the group of 74 entities. Among the analyzed companies, the majority of them does service and consultancy (26%), transport (15%) or building and construction services (11%). The details are presented in Figure 2.

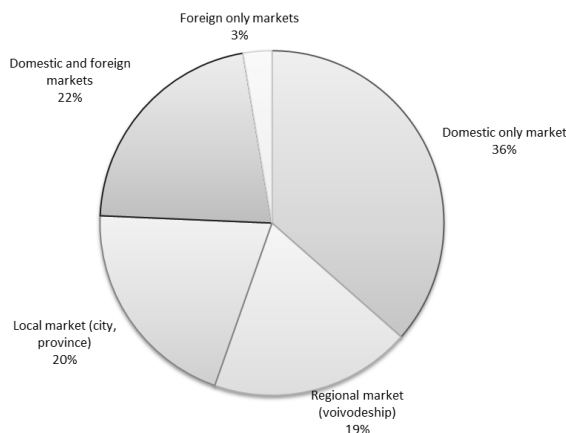
**Figure 2: The Cross-Section of Forms of Activity in % Among the Service Companies N=74**



Source: Own elaboration (2018)

A small number of companies operates in IT and industrial manufacturing (both forms of activities were 8%), 7% offers services in real estate. Other forms of business activities were indicated below 5%. This may lead to first conclusions that in case of Polish companies in the Silesian Voivodeship, the service activity focuses mainly on three major forms, among which the biggest one is usually based on multimedia tools, internet or distance relations and thus is easier to offer. Also, in case of building and construction activity, the services may be offered due to special contracts planned and organized in advance. In terms of internationalization, the companies were asked to indicate the market they operate on. The gathered information is presented in Figure 3.

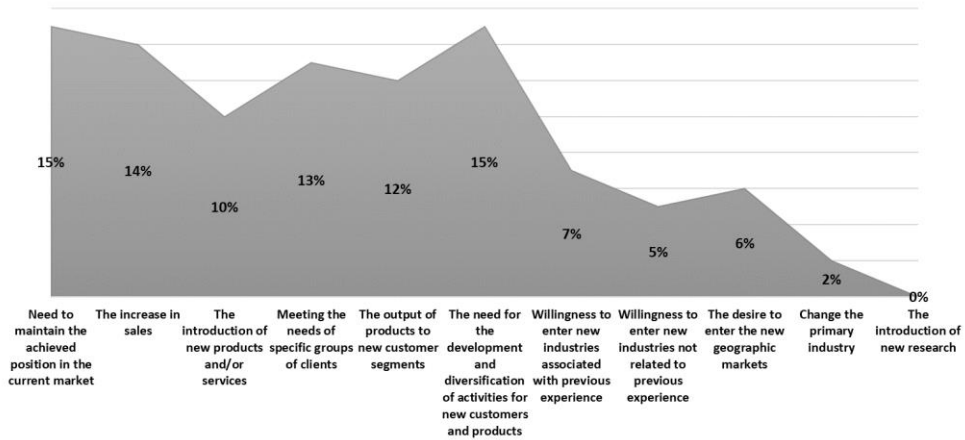
**Figure 3: Focus on Market Among the Service Companies N=74**



Source: Own elaboration (2018)

According to collected data, the majority operates only within the country (36%), 20% chooses rather a local market around city or province, 22% includes foreign markets and 2% functions only on foreign markets. Generally, 75% of service companies from the survey does not operate abroad, which shows that the level of internationalization is rather low – 25% of companies are present on the foreign markets. However, the low level of internationalization does not exclude the fact that the companies cooperate with foreign partners and clients in order to achieve economic benefits. The majority of companies just did not indicate their physical presence with the offer of services outside the domestic market. In further questions about the chief directions of development of the companies and their goals, the companies clearly indicated what they expect from the presence in the international business environment. The gathered information on directions of development of the companies is presented in Figure 4. According to collected answers, companies first of all focus on maintaining their position on the market and they are aware of the need for developing and diversifying their business activity to gain new customers and products. The basic direction of the management of the company is oriented towards obtaining the possibilities to increase sales and to be able to react effectively to clients' needs and requirements, especially of specific groups of clients. Besides, the companies indicated that significant is also the readiness to be open to the new segments of clients and offering new products and services. The minority is likely to change their industry or enter new geographical markets, or new industries connected or not with their business experience.

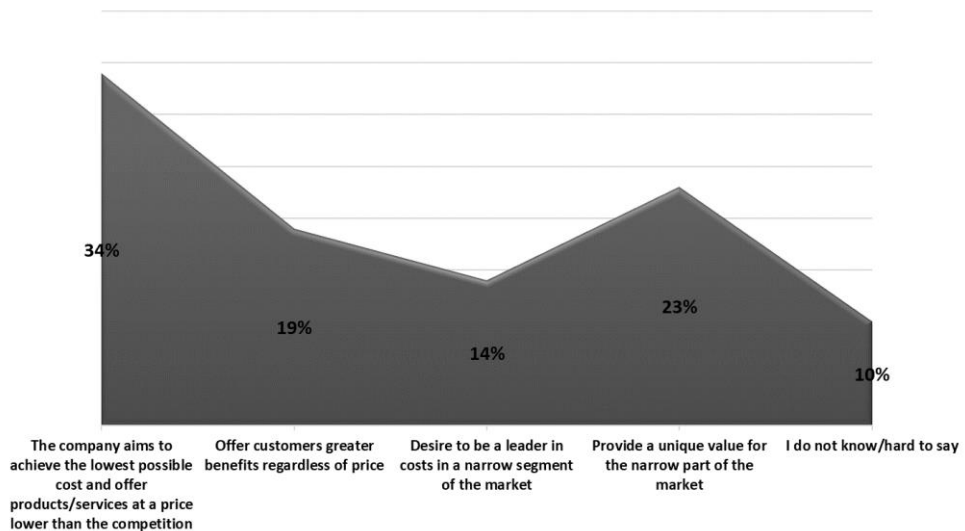
**Figure 4: The Directions of Development of the Surveyed Companies N=74**



Source: Own elaboration (2018)

Developing business by expanding the business activity or broadening the offer in the answer to the expectations of customers should be coordinated with the general goals that the companies usually root in marketing strategies. Such goals were indicated by the surveyed companies in relation to operating of The European Single Market. The results are presented in figure 5.

**Figure 5: Marketing Goals of the Service Companies N=74**



Source: Own elaboration (2018)

The collected data shows that the main goal of the service companies taking part in the survey is focused on being more competitive through cost optimization and offering the services/products at the most attractive price. 34% of companies indicated this goal as the most important one. 23% of the entities want to find its place in a narrow part of the market where they can introduce the unique offer to the customers and at the same time build the company’s reputation. Also, the goal of offering the most beneficial offers to customers despite the price

appeared to be significant, as well, as the aim of becoming the leader in costs in the narrow segment of the market. 10% was not able to precise their basic goals.

## 5. Conclusion

Strong competition and rising consumer expectations force today's companies to look for new markets abroad. There is no doubt that today, precision, quality, flexibility, speed and creativity count in production, services and trade, and that requires appropriate infrastructure, qualified staff, funds for investments, efficient organization and proper culture. Internationalization of enterprises is not so much a challenge today as the potentially enormous benefit and natural process of enterprise evolution taking place in the modern economic realities. In order for companies to be able to find themselves in these difficult and demanding conditions of the international environment, they must be able to define their goals and development directions and act on the basis of appropriate choice of strategy. The conducted study allowed for the conclusion that Polish service companies in the Silesian Voivodeship are aware of that fact and they know in which direction they should go, what goals should be set up and how to function in the conditions of international competitiveness. The results discussed in this paper are certainly just a germ of the research on internationalization, and further studies are recommended and worth conducting in order to learn more about the internationalization of service companies in other regions of Poland or/and in other countries of Europe. Such analysis could help to determine the level of internationalization and the scope of strategies taken by the service companies in the process of entering and operating in foreign markets on a larger scale. The author's credence is that her study could be regarded as the ground step in this matter.

## References

- [1] Aliber, R. (1976). Toward a Theory of International Banking. *Economic Review*, Federal Reserve Bank of San Francisco, pp. 5-8.
- [2] Aliber, R. (1984). International Banking. *Journal of Money, Credit, and Banking*, 16, pp. 661-678.
- [3] Baláž, P. (2014). Globalization of the World Economy and the Impact of China's Expansion on the Competitiveness of EU. *Proceedings of the 2nd International Conference on European Integration 2014*, VŠB – Technical University of Ostrava, pp. 14-25.
- [4] Bowman, E. H., Moskowitz, G. T. (2001). Real Options Analysis and Strategic Decision Making. *Organization Science*, vol. 12, no. 6, pp. 772-777.
- [5] Buckley, A. (2002). *Inwestycje zagraniczne*. Warszawa: PWN.
- [6] Budnikowski, A. (2003). *Międzynarodowe stosunki gospodarcze*. Warszawa: PWE
- [7] Chrzan, E., Kowalski, S. (2009). Analiza warunków wchodzenia na rynki zagraniczne w dobie globalizacji. In Wyslocka, E. (ed.). *Ekonomiczne aspekty procesu globalizacji*. Wydawnictwo Politechniki Częstochowskiej, pp. 49-50.
- [8] Fojtíková, L. (2013). Quantitative evaluation of the EU's Export Potential to Russia Using the Gravity Model. *Mathematical Methods in Economics*, The College of Polytechnics Jihlava, pp. 171-176.
- [9] Hymer, S. (1970). The efficiency (contradictions) of multinational corporations. *American Economic Review*, vol. 60, pp. 441-448.



- [10] Jarosiński, M. (2012). Urodzeni globaliści w badaniach na świecie i w Polsce. *Studia i Prace Kolegium Zarządzania i Finansów, Zeszyt Naukowy*, 114, SGH w Warszawie, pp.7-24.
- [11] Kojima, K. (1982). Macroeconomic Versus International Business Approach To Direct Foreign Investment. *Hitotsubashi Journal of Economics*, vol. 23, no. 1 (June 1982), pp. 1-19.
- [12] Kosińska, E. (2008). *Marketing międzynarodowy Zarys problematyki*. Warszawa: PWE.
- [13] Madzinová, R. (2016). Internationalization of Small and Medium-Sized Enterprises in the Slovak Republic. *Proceedings of the 3rd International Conference on European Integration 2016*, VŠB - Technical University of Ostrava, pp. 555-563.
- [14] Magdolenová, J. (2010). Analýza vybraných faktorov internacionalizácie slovenských firiem. *Journal of Competitiveness*, vol. 2, pp. 86-98.
- [15] Ohlin, B. (1993). *Interregional and International Trade*. Cambridge MA: Harvard University Press.
- [16] Pabian, A., Bylok, F., Kucęba, R. (2011). The Role of Marketing in Combating the Results of Economic Crisis in the European Union Markets. In Sepp, J., Frear, D. (eds.). *The Economy and Economics after Crisis*, BWV, Berlin, pp. 112-113.
- [17] Pierścionek, Z. (2003). *Strategie konkurencji i rozwoju przedsiębiorstwa*. Warszawa: PWN.
- [18] Pietrasieński, P. (2005). *Międzynarodowe strategie marketingowe*. Warszawa: PWE.
- [19] Rymarczyk, J. (2004). *Internacjonalizacja i globalizacja przedsiębiorstwa*. Warszawa: PWE.
- [20] Ricardo, D. (1951). Principles of political economy. In Saffra, P. (ed.). *The Works and Correspondence of David Ricardo*. Cambridge University Press, vol. 1, pp. 110-115.
- [21] Ślusarczyk, B. (2013). *Teoretyczno-praktyczne aspekty globalizacji gospodarczej*. Częstochowa: Sekcja Wydawnictw Wydziału Zarządzania Politechniki Częstochowskiej.
- [22] Świerkocki, J. (2011). *Zarys ekonomii międzynarodowej*. Warszawa: PWE.
- [23] Vernon, R. (1966). International investment and international trade in the product cycle. *Quarterly Journal of Economics*, pp. 190-207.
- [24] Vernon, R. (1971). *Sovereignty at Bay*. New York: Basic Books.
- [25] Wiktor, J.W. (1998). Internacjonalizacja a marketing międzynarodowy. Przesłanki rozwoju orientacji zagranicznej przedsiębiorstw. In Wiktor, J.W. (ed.). *Współczesne problemy marketingu międzynarodowego*. Materiały I Sympozjum Marketingu Międzynarodowego, AE, pp. 30-31.
- [26] Witek-Hajduk, M.K. (2010). *Strategie internacjonalizacji polskich przedsiębiorstw w warunkach akcesji Polski do Unii Europejskiej*. Warszawa: Oficyna Wydawnicza Szkoły Głównej Handlowej.

## Rethinking the EU Globalization Policies

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### **Abstract**

*The aim of this paper is to assess and analyze selected three pillars of EU competitiveness and suggest some possible steps forward. As the first pillar of dynamic competitiveness, single market and its size, respectively, are considered. However, some underdeveloped features of the single market persist such as difficult and costly single patent, tax harmonization etc. The second pillar from intertemporal point of view, should be the framework for screening of foreign investments. There are both long-run security and strategic advantage reasons for it. Nevertheless, at present, hardly one half of member states has such a framework. Furthermore, according to ECJ legislation, there is a national competencies supremacy in this field. As the third pillar we assess different types of public goods provision and private goods (creating spillovers) subsidization in the Baldwin-Evenett framework.*

**Keywords:** Baldwin-Evenett framework for competitiveness policy evaluation, foreign direct investment screening framework, single market strengthening

**JEL Classification:** F15, F52, H41, H42

## **1. Introduction**

Competitiveness of the EU in the globalized world is determined by many different features of both – EU Single Market functioning on the one hand and the way, in which the economic policy is made at the EU and member states levels on the other. In our paper we focus on selected, three pillars of EU competitiveness in globalized world. As the first pillar of dynamic competitiveness, the EU single market and its efficiency, respectively, are considered. However, some underdeveloped features of the single market persist such as difficult and costly single patent, tax harmonization etc. The second pillar, from intertemporal point of view, should be the framework for screening of foreign investments. The reasons for it are long-run security and strategic advantage. As the third pillar, we assess different types of public goods provision and private goods (creating spillovers) subsidization from the center or national competencies point of view.

## **2. Weaknesses of the Current Institutional Set-up – Literature Review and Main Findings**

The EU Single Market as a generator of competitive efficiency and of ever growing welfare should have been and have long been the cornerstone of output legitimacy of the whole integration process. What European integration has always lacked in input legitimacy, i.e. the democratic participation on its decision-making and institutional functioning, has been offset by contributions to productivity and welfare attributable to the Single Market, its freedoms of

movement and free and undistorted competition (Erixon, F. Georgieva, R., 2016). Opened symbolically in 1993, the Single Market remains inevitably an “ongoing project” or “work in progress” (Beattie, A., 2017) as differences between Member States that create its barriers are still numerous, and its constantly changing environment, requires a never ending “upgrading” (European Commission, 2015). This never unfinished state of things could still inspire a positive, even optimistic vision of the actual shape of the EU Single Market as it can count on its further step-by-step upgrading and its growing contribution to the EU’s output legitimacy. And for instance, the European Commission’s Communication on the “Upgrading of the Single Market” opens with praise of its achievements in the past 50 years, even though it recognizes its current problems with high unemployment, low levels of growth and investments as well as the size of the remaining barriers.

The Single Market is one of the so-called shared competencies (Article 4 TFEU), i.e. those where, in accordance with the principles of proportionality and subsidiarity, the EU must convince the Member States that, to achieve the Single Market objective, a supranational solution is the optimal one. Until the Member States wish to retain control over direct taxes, social systems, company registrations or civil procedure rules, the EU will not be able to do more than facilitate a voluntary transfer of best practices. Quite logically, there are voices calling for further transfer of competencies from Member States to the EU, the most recent example is the scenario *Doing much more together*, supported as the best option for the EU by the Commission in its *White Paper on the Future of Europe* (European Commission, 2017). Alas, further unification, during liberal times criticized for curtailing regulatory competition between Member States and thus stifling innovation, nowadays crumbles in front of a more substantive barrier: the reluctance of Europeans (Raines, T. et al., 2017).

The free movement of capital, both within the EU as well as to and from the outside world is rightly seen as a cornerstone of the Single Market architecture (Art 63 of TFEU). The general rule however cannot survive without exceptions dictated above all by strategic security interests of the EU and its Member States. The difficult issue thus is to maintain the EU's general openness to FDI inflows and to ensure at the same time that the EU's essential interests are not put in danger. Commission’s President J.-C. Juncker refused in his 2017 State of the Union address to be a “naïve free trader” and explained that in order to defend Europe’s strategic interests an EU framework for investment screening must be put in place.

The right balance between openness and safeguards is for the EU only a half of the issue. The second, equally difficult half, is the extent to which this task belongs to the EU itself or rather to each of the Member States or to an uneasy compromise between the whole and its constitutive parts. Even though under the Treaty provisions on common commercial policy, free movement of capital, control of concentrations and state aids etc. the EU undoubtedly has its say over many aspects of FDIs, the protection of public order, public security and the regime of state or private ownership remain within the purview of Member State competencies. That is why the Regulation (i.e. directly applicable uniform piece of legislation) establishing a framework for screening of foreign direct investments into the European Union (COM(2017) 487 final) has been proposed by the Commission as a very “light” one not taking the decisive say from the Member State to which an FDI is directed, even not forcing all Member State to introduce their own screening mechanism. The new duties consist merely in a structured information sharing between Member States and EU bodies and the necessity to face peer review of investment projects.

The indispensable pillar of competitiveness of nations is also well designed (public, industrial) policy, which includes provision of public goods, merit goods and other measures of industrial policy. What’s more – some peaces of current literature put emphasis on so called international

public goods (international rules for the trade and investment, state bankruptcies, international measures in the environmental field). The EU weakness is relatively small share of common budget on the EU GDP, but the ability to push common rules is more developed.

## ***2.1 Shortcomings of the Single Market***

The EU Single Market efficiency (as well as historical successes) cannot be properly assessed without looking deeper into components (different “free movements”) on which it is built. European market integration was undoubtedly a success in the field of free movement of goods for industry and consumers, as it helped to develop pan-European production chains, but it remains without comparable effects in other fields. Independent assessments agree with the Commission that the free movement of services (especially of digital ones and those provided by regulated professions), of capitals, of labour force, together with differences and loopholes in national tax regimes, are burning issues to deal with if the EU wants to cope with the pressing economic and social challenges. However, contrary to the prevailing optimism spread by the Commission, independent researchers see many more flaws and threats in the overall design, methods and future prospect of the Single Market (Kommerskollegium, 2015).

According to the World Bank Doing Business (World Bank) annual survey, the conditions for businesses on the Single Market still largely differ from one country to another. Denmark ranks as the third best country in the world comparison, while Malta the 84th. Even between the six founding members of the EEC the differences are still important (Germany ranks the 20th, Luxembourg the 63rd) and such a disparity remains more or less constant over the time as the one-decade old results of the same survey can show. In crucial aspects of doing business (like starting business, paying taxes or resolving insolvency) the relative differences are even far more pronounced and the “best” Member States rank among world top ten while the “worst” are around the 120th place. It is thus far from the same to do business in Northern or Southern part of the EU and it is also far more difficult to go over the border if the business is not exporting industrial goods. The services on which 70 % of EU’s GDP and employment depend are traded between Member States with four times smaller intensity than between states of the USA (Aussilloux, V. et al., 2017). There is over 5000 regulated professions in the EU Member States, 25 % of them regulated in only one Member State and qualified specialists, the main agents of the service based economy, thus remain locked in the country of their authorization... It seems that the EU Single Market harvested only low-hanging fruits in the 1990s, while those high in branches, where technocratic neutrality is insufficient because they are substantially more rooted in national traditions and depend on locally specific institutions, processes and discourse, it could not help much yet. Unifying standards for industrial products is a bit easier than unifying the tax base, the functioning of labour offices, or qualification requirements for building surveyors.

This briefly expressed, but statistically well documented (Erixon, F. Georgieva, R., 2016), conclusion brings us back to the question of powers conferred to by the EU by the Treaties and in relation to them to the methods of unification, harmonization or coordination of standards, procedures and institutions that are decisive for the functioning of the Single Market. The EU is not competent to decide on its competences, according to Article 5 of the TEU, it only has the powers entrusted to it by the Member States. As European integration touches more and more on the areas of political struggle and bargaining in the traditional national societies where public consent and political support are a constant necessity, the obvious absence of the European political nation, European political debate, in short of a genuine transnational democracy (Habermas, J., 2015), becomes increasingly visible. Transferring competences to the EU level means emptying the domestic political agenda,

which citizens of individual Member States still regard as their own, while Brussels is seen as the far-away source of binding solutions that leave the national political communities with “no alternatives”. Although this perception is not entirely true, the Brexit vote and the rise of populist parties in many EU countries prove that it has real political consequences. In tax issues, social peace and welfare issues, or in external migration issues (to quote just the most obvious), the EU cannot count on European solutions that would be in a foreseeable future supported by unanimous consensus.

The lack of EU competence to design and develop the Single Market from A to Z, in a holistic manner, inevitably influences the choice of methods and tools that the EU can use to “upgrade” it. The almost full unification through EU regulations is the minority option suitable especially for the short list of the exclusive EU competences under Art 3 of TFEU (namely external trade policy, competition protection and single currency). In the Single Market area other methods and tools dominate, albeit all of them have their pros and cons that complicate the “upgrading”. The most liberal option is that of negative integration pushed forward by the so-called mutual recognition (or country of origin) principle, applied hand in hand with the direct effect of Treaty articles on free movement of goods, services, persons, capitals and businesses (establishment). This option clearly favours regulatory competition between Member States and thus poses a risk of “race to the bottom” in protective standards, if it is not hampered by numerous “exceptions” justified by overriding reasons in public interest of the Member States concerned (Deakin, S., 2006). Needless to stress, that especially “old” Member States do not want to face the cheap and less regulated competition coming from “new” Member States as shown by their pressure to revise the Posting Workers Directive 96/71/EC. The reluctance to accept the country of origin principle leads (especially in the field of professional and socially sensitive services) to its full opposite: the host country (or country of destination) principle, that forces entrepreneurs to cope with 28 different standards and authorization regimes.

The Single Market directives as mere harmonization (not unification) tools seem to offer the so much sought compromise solution as they leave to Member States certain margin of manoeuvre when they implement them to their national legal orders. The problem however is that the minimum harmonization directives do not produce very often the expected results and the Commission (like in the field of consumer or data protection) tends to switch to maximum harmonization principle in order not to let the Single Market fall apart (Gerner-Beuerle, C., 2012). Unfortunately, the maximum harmonization directives resemble so much the regulations (that sometimes are even preferred, like in the case of GDPR 2016/679 Regulation that replaced the data protection Directive 95/46/EC), that they often meet with the same criticism and reluctance at the Member State level. The most important is that these positive integration measures are usually adopted to deal with specific issues (of cross-border relevance) but – due to power sharing with Member States – do not create a brand new regulatory regime that would replace the old one. They rather add another “European” layer of paperwork and bureaucracy that inflate the traditional and persistent agenda of national administration bodies (Erixon, F. Georgieva, R., 2016); (as national tax authorities, trade inspections or employment offices can testify).

In the areas where no EU power to unify or harmonize exist, the Single Market can be completed through the open method of coordination (as in social protection matters) or creation of optional regimes (as the abandoned CESL project – the 28th European Contract Law Regime proposed in 2011), i.e. methods representing a softly guided evolution towards a common standard. Unfortunately, especially in areas where the Member States still prefer their own national solutions, these methods generate rather costs (on research, communication, evaluation) than tangible results and do not lead to a significant upgrade in the Single Market unification. All in all, the EU Single Market finds itself between the rock and the hard place,

when external pressures of globalization push for greater unification of standards, procedures and institutions, but the EU's internal divisions remain so important that in all politically, socially and symbolically sensitive areas (the breaking effect of the language issue in the European patent with unitary protection can be quoted as an example), no progress can be realized soon. Careful, long-negotiated compromises which bothers everyone to roughly the same extent and combine different methods to reach the sought-after outcome are the most probable way forward.

## ***2.2 Deficits of the Present Security Screening in the FDI Field***

A recent illustration to such competences "puzzle" can be seen in the aforementioned proposal of Regulation establishing a framework for screening of foreign direct investments (FDI) into the European Union (European Commission, 2017). Up to now, there is no mechanism at the EU level and the existing national regimes are very different, some Member States do not have any specific screening of FDIs at all. Everybody feels that it is in the common interest to prevent foreign State-controlled investors (especially from countries like China or Russia) to get hold of strategic infrastructure, research or industry assets inside the EU. The goal of the proposed Regulation "to establish a framework for the Member States, and in certain cases the Commission, to screen foreign direct investments in the European Union" therefore stands for itself. At the same time however the Commission must take into account "the existing diversity between Member States in relation to screening of foreign direct investments" (more than half of them do not screen FDI yet) and that the EU cannot impose one standardized solution. The core of the draft thus consists in the common approach to screening and information exchange – for the Member States with their own FDI control mechanism and the obligation of annual reporting - for the Member States without any such mechanism.

Very likely the positive outcome of the Regulation would be the introduction of FDI screening mechanisms in majority of Member States as well as their greater transparency and possibly also their gradual convergence in some aspects. On the other hand, the increased administrative costs and a heavier regulatory burden would inevitably come too. Above all, however, it is not known what the mechanism would mean to investment projects for which Member States compete between themselves (Silk Road Economic Belt projects for instance), or more crucially, to projects that some of them seen as vital and others as dangerous ones (Nord Stream natural gas pipeline through the Baltic Sea is an obvious example here). Needless to say that Member States do not share the same definition of strategic or sensitive sectors (Sunesen E.R., Hansen, M. H. 2018, p. 26-27) and the Commission may carry out a screening on grounds of security and public order on its own, only in case where a FDI may affect projects or programmes of Union interest (like Galileo etc.). Nevertheless, the proposed Regulation is the realistic maximum that can be achieved today.

## ***2.3 Outdated Division of Competencies - Industrial Policy and Public/Merit Goods Provision***

Existing set-up of mutual policies a centralized financing of selected policy fields such as the common agriculture policy (CAP) is, in many cases, given by the historical development. However, from the contemporary point of view it appears to be obsolete. Besides the subsidiarity principle, it barely meets the cost-benefit analysis requirements and it does not reflect such approaches, which represent the Baldwin and Evenett framework. This framework illustrates, that it is worth providing certain public and merit goods with a high level of international mobility from the supranational level. On the contrary, on the national level,

provisions of such goods should be limited. This approach is discussed in greater detail in subsection 3.3.

### **3. Aiming at Increasing EU Global Competitiveness – Reshaping Policies**

#### ***3.1 Reshaping Internal Market Functioning***

With weak public support and the absenting political will the EU Single Market, further developed in the current rails, would not play the decisive role in boosting the competitiveness of EU economies. As the Commission foresees in its *Nothing but the Single Market scenario* of its White Paper on the Future of Europe: “market for goods and capital strengthened; standards continue to differ; free movement of people and services not fully guaranteed... capacity to act collectively is limited; issues of common concern often need to be solved bilaterally” (European Commission, 2017). Should the wealth creating function of the Single Market be enhanced then both the support of the elites and of the general public must be gained. Compromises in politically and socially sensitive issues like taxes, publicly regulated services, social security, energy mix are not however at hand and even the thorough enforcement of the existing Single Market *acquis* by the Commission and the European Court of Justice sometimes sparks fierce controversies as the Brexit history shows. An “enhanced cooperation” of the interested Member States, permitted under the Arts 20 TEU and 326-334 TFEU, would then be the likely way forward in many future developments of the Single Market, as it is nowadays for the European patent with unitary effect and financial transaction tax.

#### ***3.2 Need for Higher Security Protection in the FDI Field***

FDI screening should be further watched and analysed as a litmus test of the EU’s capacity to free itself from the “stuck in the middle” position between an associated State and an association of States when in some aspects it is already very much integrated and in some others not at all. Risks posed by FDIs as manifestations of global challenges should rationally be coped with by the most competent EU acting on behalf of a common interest. In reality, however, the EU today cannot play this role without Member States loyal cooperation and it is to be seen whether external pressures coming from competing powers like China and Russia would push enough Member States together enough to create a more supranational mechanism of FDI control.

#### ***3.3 Designing Modified Frameworks for Public and Merit Goods Provision on the EU Level***

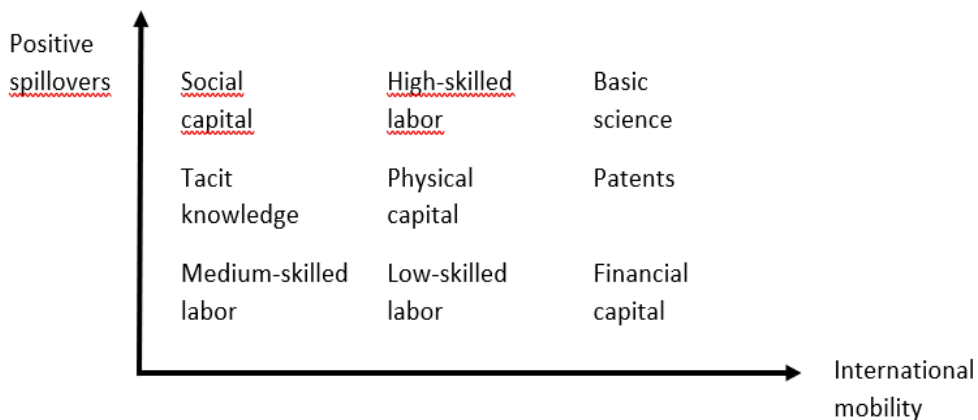
Apart from the description, how complicated an achievement of feasible political consensus at the EU level could be, it is worth declaring, that, not only single market, but an appropriate industrial policy could and should be important for general EU competitiveness in a globalized world.

As Baldwin points out (Baldwin 2016, pp 229) or (Baldwin and Evenett 2015, pp 48, 49) respectively, standard competitiveness policy of rich nations is the promotion of certain productive factors as human capital and/or knowledge capital. The traditional justification of such a policy is a bigger social reward of the above mentioned measures than the private one. This argument is broadly known as a “positive spillovers” argument. But in current economy,

the newly created human- or knowledge capital tends to flow to the nation where their reward is highest.

Baldwin (2016) offers, for purpose of workability of different public policy measures aiming at positive spillovers support, a two-dimensional evaluation framework as follows.

**Figure 1: Two-Dimensional Evaluation Framework for Industrial Policy Measures**



Source: Modified from Baldwin (2016), Figure 55

A clear implication of such evaluation is that international coordination or directly centralization of industrial policy is worth, especially in cases of growth factors which are located north-east in the scheme.

#### 4. Conclusion

To conclude, the EU global competitiveness strengthening could be originated by a more effective functioning of internal market. An “enhanced cooperation” of the interested Member States, permitted under the Arts 20 TEU and 326-334 TFEU, would then be the likely way forward in many future developments of the Single Market, as it is nowadays for the European patent with unitary effect and financial transaction tax. An improved ability to do security screening of FDI inflow with the aim to protect strategic industries (of all member states) against foreign State-controlled investor is needed. FDI screening should be further watched and analysed as a litmus test of the EU’s capacity to free itself from the “stuck in the middle” position between an associated State and an association of States when in some aspects it is already very much integrated and in some others not at all. Risks posed by FDIs as manifestations of global challenges should rationally be coped with by the most competent EU acting on behalf of a common interest. Last but not least, an ability to coordinate industrial policies in such a way that the subsidies with easily mutualized impact should be the matter of appropriate coordination, harmonization or centralization as shows the Baldwin-Evenett approach.



## References

- [1] Aussilloux, V. Benassy-Quere, A. Fuest, C., Wolff, G. Making the best of the European single market. *Bruegel Policy Contribution*, Issues No 3/2017 Available at: <http://bruegel.org/publications/> [cit 02-02-2018], p. 1
- [2] Baldwin, R. (2016) *The Great Convergence: Information Technology and the New Globalization*. *The Belknap Press of Harvard University Press*, London
- [3] Baldwin, R. Evenett S. (2015) Value creation and trade in 21st century manufacturing, *Journal of regional science*, vol. 55, No. 1, 2015, pp. 31–50
- [4] Beattie, A. (2017). Long road ahead to completion of EU single market. *The Financial Times*, November 16, 2017.
- [5] Blinder, A. (2006). Offshoring: The Next Industrial Revolution? *Foreign Affairs*, March/April 2006.
- [6] Deakin, S. (2006). Legal Diversity and Regulatory Competition: Which Model for Europe? *European Law Journal*, Vol. 12, No. 4, July 2006, p. 440-454,
- [7] Erixon, F. Georgieva, R. (2016) *What is Wrong with the Single Market? WP No 1/2016 European Centre for International Political Economy*. [cit.2018-02-02]. Available at: [http://ecipe.org/browse/?subj\\_subject=42](http://ecipe.org/browse/?subj_subject=42)
- [8] European Commission (2015). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions „Upgrading the Single Market: more opportunities for people and business“* Brussels, 28. 10. 2015 COM (2015) 550 final.
- [9] European Commission (2017). *Proposal for a Regulation of the European Parliament and of the Council establishing a framework for screening of foreign direct investments into the European Union*. Brussels, 13.9.2017 COM (2017) 487 final.
- [10] European Commission (2017). *White Paper on the Future of Europe. Reflections and scenarios for the EU27 by 2025*. 1. 3. 2017 COM (2017), p. 24-26.
- [11] Gerner-Beuerle, C. (2012). United in diversity: maximum versus minimum harmonization in EU securities regulation. *Capital Markets Law Journal*, 7 (3) 2012. pp. 317-342.
- [12] Habermas, J. (2015). Democracy in Europe: Why the Development of the EU into a Transnational Democracy Is Necessary and How It Is Possible. *European Law Journal*, Volume 21, Issue 4, July 2015, pp. 546–557
- [13] Kommerskollegium (2015). *Economic Effects of the European Single Market Review of the empirical literature*. National Board of Trade, May 2015 – First Edition. Available at: <https://www.kommers.se/Documents/dokumentarkiv/publikationer/2015/Public-economic-effects-of-the-european-single-market.pdf> [cit.2018-02-02].
- [14] Raines, T. Goodwin, M. Cutts, D. (2017) *The Future of Europe: Comparing Public and Elite Attitudes*. The Royal Institute of International Affairs 2017. London: Chatham House. Available at: <https://www.chathamhouse.org/publication/> [cit. 02-02-2018].

- [15] Sunesen, E. R., Hansen, H. M. Screening of FDI towards the EU. *Copenhagen Economics*, Danish Business Authority January 2018 Available at: <https://www.copenhageneconomics.com/dyn/resources/Publication/publicationPDF/2/422/1516371455/copenhagen-economics-2018-screening-of-fdi-towards-the-eu.pdf> [cit. 20-03-2018].
- [16] World Bank. *Doing Business, Measuring Business Regulations*. Available at: <http://www.doingbusiness.org/> [cit.2018-02-02].

## Financial Support from EU's Common Agricultural Policy for Young farmers in the Czech Republic

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### **Abstract**

*Age structure of agricultural workers in the Czech Republic is not favourable, which can negatively influence the competitiveness of the sector as younger farmers tend to be more open to innovation and more often learn new approaches to farming and business. Therefore, EU tries to support the generation renewal from Common Agricultural Policy funds – from 1<sup>st</sup> pillar and by measures of Rural Development Program. The aim of the paper is to assess the measures supporting young farmers implemented in the Czech Republic. Measures are compared in terms of their conditions and outcomes and their contribution to the policy objectives. Despite the amount of granted money and receivers of the support, the problem of generational change remains. Farmers usually overtake a farm (typically from parents) as starting completely new business is complicated (e.g. due to lack of available land and finances and administrative burden). Therefore, the measures that would help young farmers to overcome the entry barriers shall be implemented too.*

**Keywords:** *Common Agricultural Policy; European Union; Rural Development Program; subsidies; young farmers*

**JEL Classification:** *Q18, H25, J11*

### **1. Introduction**

In the Czech Republic, the share of farmers – managers of the agricultural holdings under 35 years – was lower than 5% in 2013. On the other hand, there were over 33% of managers in age category 55 to 64 years. Young managers of farms represents only 1.2% of all workers (CZSO, 2011) and 25.8% of all managers respectively.

That can negatively influence the competitiveness of the sector as it is possible to assume that younger farmers are more open to innovation and more often learn new approaches to farming and business. Besides, “younger farmers have a longer planning horizon and tend to invest more heavily in business growth than comparable older age groups.” (Davis et al., 2013). They tend to promote more innovations as for example in Hungary, where the Young Farmers' Hungarian Association is proactive in promoting knowledge sharing and, by implication, innovation in farming (Fieldsend, 2016). This is confirmed by Galanopoulos et al. (2011) who found out that older age of the farmers and the lack of successors is often the main reason for

insufficient level of taking over new production technologies and improvement of the management systems, that can be realized only in case of the presence of the returns to scale.

However, young farmers might not be more technically efficient (see Pechrová (2015a)) who found that young and other farmers do not statistically significantly differ in terms of the technical efficiency) as same as it cannot be clearly concluded whether the farms improved after receiving the support (see Pechrová (2015b) who calculated profitability indicators and technical efficiency of 11 young farmers, but ROA, ROE or ROS varied after obtaining the subsidy. She found no statistically significant relation found between the number of years from subsidy receiving and technical efficiency.). Similarly, also findings of Davis et al. (2009) suggest that is any significant differences in performance between farms depending on the age of manager. On the other hand, farmers that are open to sustainable agricultural practices such as organic farming tend to be younger. (Lobley et al., 2009).

Hence, the generation renewal is crucial. Despite that the initial motivator and guide into agriculture for young and new-entrants to the sector is often the knowledge obtained from family, Šūmane et al. (2017) proclaimed, there are certain barriers that hinder the practical entrance to the sector. “Many socioeconomic factors, such as reduced access to land and credit, and lack of rural infrastructure, drive young people away from a career in agrarian sector.” (Rovný, 2016) Besides as found in a study by Zagata and Sutherland (2015), there is a problem of limited opportunities for young people to access agricultural land, particularly in Eastern Europe. Hence, the start-up of the young farmers’ businesses is supported from public funds.

## 2. Support from EU

Support for generational renewal in agriculture is well rooted in the Common Agricultural Policy (CAP) of the European Union (EU). Already McSharry’s reform, adopted in 1992 pointed to the fact that the high number of farmers is old, thus encompassing incentive programs to support retirement, reducing employment or moving farmers to other sectors. CAP currently constitutes of two pillars. While the first one includes direct aid and market measures as well as the payments to be claimed, the second pillar represents mostly project based subsidies. (Pechrová, 2013) Under the 1<sup>st</sup> pillar young farmers have higher direct payments (in addition to the base payment per hectare) and under 2<sup>nd</sup> pillar – Rural Development Programme (RDP) there is a special programme for starting farmers under 40 years setting up their business for the first time. The RDP measure “Setting up Young Farmers” aims to fight the demographic problems of these areas. (Bournaris et al., 2014)

Importance of the support for young farmers in countries of the EU varies in terms of finances devoted to young farmers compared to the total budget of the RDP and the share of farmers with support. Support for generation renewal can be spread within RDP in several measures – M01 Transfer of knowledge, M02 Advisory services, M04 investment, M06 Farm development and M16 Cooperation. For example, Czech Republic provided 57 047 EUR (0.002% of total RDP budget) to measure M01 Transfer of knowledge. Then 30 million EUR of total public expenditures was allocated to M06 Farm development. (Šimpach, 2017). M06 supports the entry of young persons into the agricultural sector by providing a one-off grant to trained young farmers who have set-up in farming for the first time. (Bournaris et al., 2016)

Czech RDP 2007–2014 supported farmers up to their 40<sup>th</sup> birthday, while in current RDP 2014–2020 are eligible also farmers up to their 41<sup>st</sup> birthday. (Šimpachová Pechrová, 2017) The form of the support is investment grant up to 70 000 EUR per one business plan of the young farmer. “The potential merits of such assistance lies in an aspiration to bring into the

industry well qualified younger people who can provide a firmer foundation for the development of a dynamic and competitive sector in the future.” (Davis et al., 2013)

### 3. Materials and methods

The aim of the paper is to assess the measures supporting young farmers implemented in the CR. We particularly pay attention to the measures I.3.2 and 6.1.1 *Setting-up of the young farmers activities* of Rural Development Programme (RDP) financed from EU resources (EAFRD). Both measures are compared in terms of their conditions and outcomes and their contribution to the policy objectives are outlined. Firstly, support from 1st pillar and then from 2nd pillar of CAP presented. We based our analysis on the publicly available data from Ministry of Agriculture of the Czech Republic (MoA) and State Agricultural Interventional Fund (SAIF) and on the data about the amount of standard production of young farmers that were provided by the MoA. The analysis is done from financial and performance point of view.

### 4. Results

Direct payments provided under the first pillar of the CAP has changed and since 2014 consist of seven parts, where the payment scheme for young farmers is mandatory. It is provided in the form of the addition is in the height of 30% of the basic payment and paid to the farmers up to 40 years and new starting farmers or agricultural holdings founded in recent 5 years. It is provided only for 5 years since the foundation and on maximum 90 hectares. Rate in the year 2015 was 885 CZK (25% from SAPS in height 3543 CZK), 878 CZK (25% from 3514 CZK) in year 2016 and the lowest was in 2017, only 844 CZK in addition to 3 375 CZK of SAPS. In year 2015 3 890 of farms was supported which represented 77 650 hectares. In later years, the number of applicants was much higher (see Tab. 1). Hence, average supported acreage was in all years around 20 ha. The share of legal entities increased slightly.

National financial envelope was in all three years 70 mil. CZK that represents around 0.15% of the total finances (SAPS represents almost half of them). Because the support for young farmers did not exist before, it is not possible to assess how many young farmers had been supported in previous years. We can suppose that the number of supported farmers is now stabilized and that there are slightly over 4 thous. of them benefiting from higher direct payments on hectares or livestock unit (LU).

**Table 1: Direct Payments – Additional Support to Young Farmers**

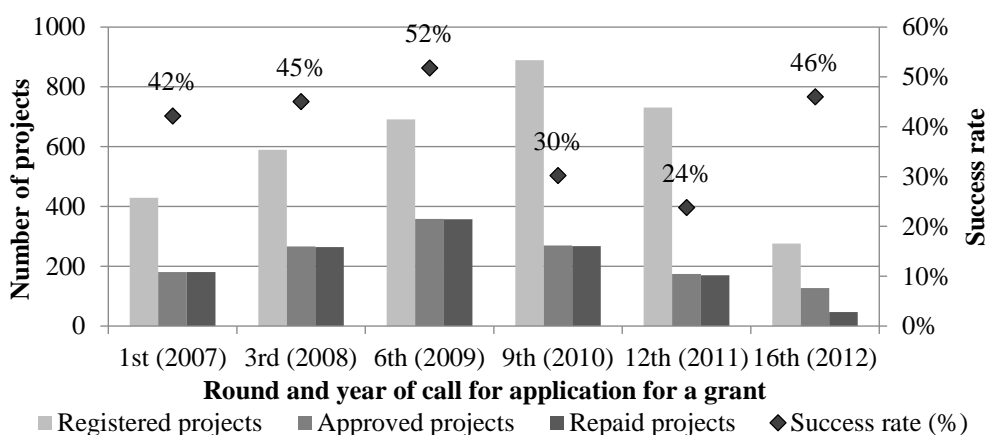
	2015	2016	2017
<b>Total number of applicants - young farmers</b>	3 890	4 273	4289
<b>Total supported area</b>	77 650 ha	84 475 ha	84 364 ha
<b>Average supported area</b>	20.0 ha	19.8 ha	19.7 ha
<b>No. of physical persons</b>	3 724 (96%)	4 050 (95%)	N/A
<b>No. of legal persons</b>	166 (4%)	223 (5%)	N/A

Source: MoA (2017), MoA (2018), own elaboration

Regarding the RDP, between 2007 and 2013, more than 126 000 young farmers in the EU received financial assistance to start operations on their farms, in total amount of 3,65 bil. EUR

(ENRD, 2014). The support is granted based on the submitted business plan and its implementation that provides to some extent a control on the way in which grant aid is invested. Because it is an investment type of support, to assess its effectiveness needs a longer time horizon. Therefore, it is still not possible to assess the effectiveness of the aid provided in the new programming period. Hence, we assess first the subsidies in the 2007–2013 programming period. Under measure I.3.2 *Setting-up of the young farmers activities* 6 rounds of call for grants' applications took place. During the duration of the measure, 3 606 projects were submitted and registered, 1 364 of which were approved and 1 351 repaid till 16<sup>th</sup> September 2015 (see Fig. 1.). Repaid amount was 1.5 bil. CZK (till 09/2015; but 9.7 CZK still had to be repaid). Average success rate of applicants was only 38%. Especially in 12<sup>th</sup> call the it was very low, because there was submitted a high number of applications (731). However, most applications were submitted in 2010. In last round in 2012 was success relatively high (46%) thanks to low number of applications. The most applicants in absolute terms succeeded in year 2009, when in 6<sup>th</sup> round was submitted 391 and accepted 358 applications.

**Figure 1: Number of Registered, Approved and Paid Projects from RDP 2007-2013**



Source: MoA (2015), own elaboration

According to Eurostat, there were 5000 farmers up to 35 years in farms' management. Hence, the program supported 27% of them. Every young starting farmer could get up to 1.1 mil. CZK, but in many cases the applicants requested lower amount. Majority of finances was paid in 2009 in 6<sup>th</sup> round. On average, the most finances per project was spent at the beginning of the 1<sup>st</sup> round. On the contrary, projects with the lowest average value 1 007 450 CZK were submitted in year 2010. Each year the average age was similar, women were on average about 3 years older constantly across all rounds. The highest number of beneficiaries (362) was between 25 and 29 years old. Persons over 30 years of age represented about 47% of sample, persons under 25 years of age 26%. However, the percentage of big farms increased, so if the number of holdings with young managers decreased, the acreage of increased. Despite that, the largest category of young farmers' holding is up to 50 ha (there were 53% of them in 2013).

Predominant type of business remains mixed crop and livestock production, field crops and grazing livestock. The minimal interest of starting entrepreneurs was in individual breeding of pigs and poultry, the milk sector or horticulture, which corresponds to the overall situation in agriculture in the CR – see Ekotoxa and Ireas (2016).

Generation renewal in RDP 2014–2020 shall be supported by financing 750 young farmers. While the aim in previous programming period was 1 500 and so-far 1 364 projects were

repaid, currently it is supposed that there will be 2.86% of holdings with supported development plan or investments. In 01/2018 already 781 projects were approved or recommended. This number can be lower, as not all projects will be repaid. In previous programming period, there were 1375 approved projects, but only 1286 repaid. Nevertheless, the number of approved projects in new period is relatively high considering, that so far only 2 calls for subsidies took place. Similar number of approved projects was achieved in previous period only in the 3rd call. Besides, their number currently exceeds stated target.

So far, there were only two rounds of calls (2<sup>nd</sup> round in 2016 and 4<sup>th</sup> round in 2017). In 1<sup>st</sup> call, there were submitted 682 applications, but the administration was stopped in 141 cases; 507 projects were recommended and 34 alternated. It has been signed yet 538 agreements on providing the subsidies. Hence, the success rate was high – 86.1%. The points awarded to projects ranged from 30 to 96, with an average of 61. Total amount of demanded finances was 685 mil. CZK. Average age of young applicants was 31, while half of the young farmers was older and half younger than 30 years. The youngest applicant was 19 years old, the most frequent age was 26 years. Some farmers (7) did not have any land (they probably run only livestock production), but an average applicant managed around 30 hectares. Only 21 farms were larger than 100 hectares. On the other hand, 79 had less than 5 hectares.

The value of SO was obtained from the appendix of application for grant. Majority of young farmers has small SO. Only few farmers had SO higher than 3 mil. CZK. The prevailing type of production was growing of wheat, permanent non-extensive meadows and pastures, followed by barley. Majority of projects included permanent meadows and pastures and livestock production – livestock up to 1 year. In 288 cases was part of sowing process wheat, in 264 cases fodder crops and in 129 projects appeared potatoes. If young farmers had livestock production, the largest volume of SO consisted of cattle breeding up to 1 year and other cows. The intent to breed cattle appeared in more than 700 projects. In addition, production of goats and sheep for milk production was important. Most projects contained cattle, sheep, goats and equines. On the contrary, the less type was breeding rabbits and poultry.

In the second call were registered 478 projects and approved 240 in amount of 3.75 mil. CZK (3 were denied so far). Originally there were 264 in category Recommended, 61 in category Alternative and 153 was not-recommended. The success rate was around 50%. Average number of points per project was 63 ranging from 52 to 90. There were 150 men and 59 women and 31 limited liability companies. There is no publicly available information about the acreage of the supported farms so far. Also, the SO of farms is not published. From publicly available data, we can see certain trends. Despite that mostly the titles of the projects are “Setting-up of the business”, sometimes they enable to see the type of production. A content analysis revealed that 15 projects were aimed on crop production, particularly of fruit (7 cases from which 3 were for wine production), there was 1 project for barley storage and 1 for processing of beer and 1 for lavender. Mixed production appeared in 6 projects and livestock production in 28. Cattle production was declared in 6 projects as same as goats breeding. There were 4 farms in ecological type of management and 2 were aimed also on horse breeding.

## 5. Discussion

Despite that the measures supporting young farmers is well rooted in CAP, it is very hard to access their real contribution. Authorities usually monitor only the number of applicants (that is relatively high in both programming periods), success rate of the applicants and fulfilling of the target of the share of supported young farmers from all. There should be used more sophisticated methods such as counterfactual analysis which compares the situation of those farmers who took advantage of the support with those who started their farms without support.

However, it is difficult to find matched pairs of farmers. Therefore, simulation models are used. Davis et al. (2013) used dynamic farm-level optimization framework of the model and find out that New Entrants Scheme which will assist younger people who wish to set-up in farming had a significantly more positive impact than Early Retirement Scheme. But e.g. in Greek,  $\frac{1}{4}$  of 254 respondents claimed that they have regretted participating in Young farmer policy scheme. “The most frequent reason... is that this policy scheme was highly promoted, creating this way higher expectations than the real potentials.” (Kontogeorgos et al., 2014).

The problem of death weigh of the policy tools is also well known and discussed for example by Doucha et al. (2017). Also, Balmann and Sahrbacher (2014) highlight that subsidies reduce scope of action for future policies. It is quite usual that young farmers would start the farming activities even without support as they “have to” overtake the firm from their parents or they wish to continue in the family business. In this case, financial support for investment plan is facilitating the process, which would happen anyway.

Another situation is in case when farmers start new firm which is harder due to entrance barriers (lack of soil or credit possibilities) and not related to young farmers only. Ingram and Kirwan (2011) described, how setting up long-term arrangements enables the new entrant to “buy into” an existing farm business and gradually taking over managerial control in Cornwall, United Kingdom, but found deep-rooted reluctance towards participation in joint ventures. This type of taking over the farm is not used in the CR and probably does not represent a feasible way. Support for young starting-up farmers, therefore, seems as the only possible way so far. Despite that the amount of finances will shrink, with declining population of farmers, could be sufficient. A projection elaborated by Šimpach and Pechrová (2015) shows that while in 2011 it there were 12.1% of young farmers (potential applicants for subsidies) supported by 205.7 bil. EUR, this amount will be able to cover 18.6% of young farmers in 2041.

## 6. Conclusion

The aim of the paper was to assess the measures supporting young farmers that were implemented in the CR. We focused on measures from CAP and directly aimed at those farmers and are financed from the means of the EU. In both programming periods (2007–2013, 2014–2020) the interest of young applicants was high. Hence, the success rate was only 38%, 67.3% resp. It is therefore interesting why the MoA choose to support only 750 in current programming period, while the target in previous period was set on 1500. At that times it was achieved from 87% (1300 projects were supported). Currently already around 780 projects are approved to be funded and there were only 2 rounds of calls for subsidies so far, while in previous period there were 6 of them. Hence, the set goals will be probably exceeded.

Besides, farmers usually overtake a farm (usually from parents) as starting completely new business is complicated (due to lack of available land and finances and administrative burden). Therefore, the measures that would help young farmers to overcome the entry barriers shall be probably implemented too. Besides, so far, the financial support did not succeed too much in attracting young people to livestock production (as it is desirable according to the strategies of agricultural sector proclaimed by the MoA). Hence, this shall be also considered.

Nevertheless, our focus was only on measures from CAP and directly aimed at young farmers. There are other possibilities, such as Farming and Forestry Relief and Guarantee Fund that provides grants on interests of investment loans with higher rate of support to farmers younger than 40 years. Besides, many measures influence the decision of young farmers also indirectly – such as measure *M04 – Investment to tangible assets*, operation 4.1.1 (agricultural



investments) and 4.2.1 (food-processing investments) of RDP 2014–2020. Hence, the challenge for future research is to examine the subsidies in broader context of other measures.

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### **References**

- [1] Balmann, A. and Sahrbacher, Ch. (2014). Structural Implications of First Hectares Payments and Young Farmer Support within the EU CAP Reform 2013: The German Case. In *2014 International Congress, European Association of Agricultural Economists*, pp. 1–20.
- [2] Bournaris, T., Moulogianni, C. and Manos, B. (2014b). A multicriteria model for the assessment of rural development plans in Greece. *Land Use Policy*, vol. 38, pp. 1–8.
- [3] Bournaris, Th., Moulogianni, Ch., Arampatzis, S., Kiomourtzi, F., Wascher, D.M. and Manos, B. (2016). A knowledge brokerage approach for assessing the impacts of the setting up young farmers policy measure in Greece. *Environmental Impact Assessment Review*, vol. 57, pp. 159–166.
- [4] CZSO (2011). *Pracovní síly v zemědělství, 2012* [online]. [cit.2018-01-20]. Available at: [http://www.czso.cz/csu/2012edicniplan.nsf/t/62002E535B/\\$File/212712k11.pdf](http://www.czso.cz/csu/2012edicniplan.nsf/t/62002E535B/$File/212712k11.pdf)
- [5] Davis, J., Caskie, P. and Wallace, M. (2009). Economics of farmer early retirement policy. *Applied Economics*, vol. 41, pp. 35–43.
- [6] Davis, J., Caskie, P. and Wallace, M. (2013). Promoting structural adjustment in agriculture: The economics of New Entrant Schemes for farmers. *Food Policy*, vol. 40, pp. 90–96.
- [7] Doucha, T., Pechrová, M., and Chaloupka, O. (2017). Investment supports to the Czech farms and their expected future under the CAP 2020+. In *Proceeding of the International Scientific Conference "Strategies for the Agri-Food Sector and Rural Areas - Dilemmas of Development"*, pp. 85–95.
- [8] ENRD (2014). *RDP Summaries* [online]. [cit.2018-01-20]. Available at: [https://enrd.ec.europa.eu/policy-in-action/rural-development-policy-figures/rdp-summaries\\_en](https://enrd.ec.europa.eu/policy-in-action/rural-development-policy-figures/rdp-summaries_en)
- [9] Ekotoxa, s.r.o. and Ireas centrum, s.r.o. (2016). *Ex-post hodnocení Programu rozvoje venkova ČR za období 2007-2013, Závěrečná zpráva* [online]. [cit.2018-01-20]. Available at: [http://eagri.cz/public/web/file/568806/Ex\\_post\\_\\_PRV\\_2007\\_13\\_ZZ\\_final.pdf](http://eagri.cz/public/web/file/568806/Ex_post__PRV_2007_13_ZZ_final.pdf)
- [10] Fieldsend, A. F. (2015). Innovation in Family Farming in Eastern Europe and Central Asia. *Rural areas and development*, vol. 13, no. 2016, pp. 7–22.
- [11] Galanopoulou, K., Abasa, Z., Lagab, V., Hatziminaoglou, I. and Boyazoglou, J. (2011). The technical efficiency of transhumance sheep and goat farms and the effect of EU subsidies: Do small farms benefit more than large farms? *Small Ruminant Research*, vol. 100, pp. 1–7.

- [12] Ingram, J. and Kirwan, J. (2011). Matching new entrants and retiring farmers through farm joint ventures: Insights from the Fresh Start Initiative in Cornwall, UK. *Land Use Policy*, vol. 28, pp. 917–927.
- [13] Kontogeorgos, A., Michailidis, A., Chatzitheodoridis, F., Loizou, E. (2014). “New Farmers” a Crucial Parameter for the Greek Primary Sector: Assessments and Perceptions Achilleas, In *International Conference on Applied Economics (ICOAE) 2014, Procedia Economics and Finance*, vol. 14, pp. 333–341.
- [14] Lobley, M., Butler, A. and Reed, M. (2009). The contribution of organic farming to rural development: an exploration of the socio-economic linkages of organic and non-organic farms in England. *Land Use Policy*, vol. 26, no. 3, pp. 723–735.
- [15] MoA (2017). *Výroční zpráva pro přímé platby za rok 2016* [online]. [cit.2018-01-20]. Available at: [http://eagri.cz/public/web/file/542448/VZ\\_PP\\_2016.pdf](http://eagri.cz/public/web/file/542448/VZ_PP_2016.pdf)
- [16] MoA (2018). *Vyhodnocení příjmu jednotné žádosti (přímé platby) v roce 2017* [online]. [cit.2018-01-20]. Available at: [http://eagri.cz/public/web/file/566788/Vyhodnoceni\\_prijmu\\_JZ\\_2017\\_\\_\\_prime\\_platby.pdf](http://eagri.cz/public/web/file/566788/Vyhodnoceni_prijmu_JZ_2017___prime_platby.pdf)
- [17] Pechrová, M. (2013). Funding agricultural holdings' investment projects: Focus on subsidies. *Ekonomická revue – Central European Review of Economic Issues*, vol. 16, pp. 227–237.
- [18] Pechrová, M. (2015a). The technical efficiency of young farmers in the Czech Republic. In *International Days of Statistics and Economics*, Slaný: Melandrium, pp.1262–1269.
- [19] Pechrová, M. (2015b). The profitability and technical efficiency of young farmers supported from Rural Development Programme. In *Mathematical Methods in Economics 2015*, pp. 618–623.
- [20] Rovný, P. (2016). The Analysis of Farm Population with Respect to Young Farmers in the European Union. In *Procedia - Social and Behavioral Sciences*, vol. 220, pp. 391–398.
- [21] Šimpach, O. and Pechrová, M. (2015). Development of the Czech Farmers' Age Structure and the Consequences for Subsidy Policy. *Agris On-line Papers in Economics and Informatics*, vol. 7, no. 3, pp. 57–69.
- [22] Šimpach, O. (2017). Importance of young farmers in selected member states of European Union. In *Reprodukce lidského kapitálu – vzájemné vazby a souvislosti (RELIK 2017)*. Prague: Oeconomica, pp. 446–453.
- [23] Šimpachová Pechrová, M. (2017). What is the motivation and barriers for young people to enter the agricultural sector? In *Reprodukce lidského kapitálu – vzájemné vazby a souvislosti (RELIK 2017)*. Prague: Oeconomica, pp. 454–461.
- [24] Šūmane, S., Kunda, I., Knickel, K., Strauss, A., Tisenkopfs, T., des Ios Rios, I., Rivera, M., Chebach, Z. and Ashkenazy, A. (2017). Local and farmers' knowledge matters! How integrating informal and formal knowledge enhances sustainable and resilient agriculture. *Journal of Rural Studies*, vol. xxx, pp. xx–xx, (in press).
- [25] Zagata, L. and Sutherland, L-A. (2015). Deconstructing the ‘young farmer problem in Europe’: Towards a research agenda. *Journal of Rural Studies*, vol. 38, pp. 39–51.

## EU Innovation Policy: Changes and New Approaches in Procter & Gamble

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### Abstract

*The aim of the paper is to find out whether the intensity and effectiveness of innovation contributes to measuring creativity and innovative approaches to the company portfolio. In contribution was presented the innovation policy EU, new approaches and innovation changes in Procter & Gamble. The study is divided into two specific parts – the theoretical and the analytical part – in order to verify stated hypothesis that stands: The use of complex system of innovation evaluation contributes to the successful product implementation. The following methods were used in the theoretical and analytical part to analyse the present contribution: analysis, synthesis, comparison, observation, questionnaire and interview. Basing on the results of the analysis, it can be concluded that the hypothesis has been verified. Without the complex evaluation system, the probably time-to-market indicator of the newly developed or innovated products/services would be continuously increasing alongside with the amount of innovative ideas, as the consideration in terms of one metrics are not sufficient for the purposes of innovation potential which is conditioned by the quality of human resources and the organization's capability to run more parallel innovative international projects.*

**Keywords:** changes and new approaches, EU innovation policy, innovation process, Procter & Gamble

**JEL Classification:** M21, O32, O50

### 1. Introduction

The importance of an EU innovation policy for employment, competitiveness, environment, industry and energy is to transform research results into better services and products, maintain competitiveness on the world market and improve the quality of life of European citizens. The aim of the EU innovation policy is to create a framework to bring new ideas to the global market.

According to (Boscoianu, Prelipcean, and Lupan, 2018) innovation can be the result of a partial business activity or research activity, the purchase of know-how, patents, utility and industrial designs and licenses. How to say (Evans, Vladimirova, Holgado et al., 2017) a stimulus for creating new organizational directives, and measures with the support of modern information and communication technologies, particularly the internet and social networks (Kulyk and Škodová Parmová, 2017). The continual innovation in compliance with the development of

the market and feedback from company's stakeholders is nowadays necessary in order to gain or maintain the competitive advantage within the market sector (Schuhmacher, Kuester and Hultink, 2018). The innovative approaches to the production are commonly associated with the permanent analysis of the possibilities of improvement that are based on the overall and complex assessment of consumers' needs and expectations (Pianta, 2017). The aspects of implementation of new or modified products/services across the organizational structure of the company are the key subject of innovation process (Davids and Frenken, 2018). The management of innovation basis on detailed strategies and models (Grubb, McDowall and Drummond, 2017) that describe procedures associated with the development and following integration of the new or modified products/services into the production process (Smith, Gilbert and Sutherland, 2017), including the monitoring and assessment of the innovative impact via stated metrics, says (Sölvell, 2018). The innovation itself is then after seen as a part of the complex process that stands on the launch (Slowak and Regenfelder, 2017). When quantifying the customer value, the magnitude of the benefit is calculated as a measure customer satisfaction that is based on the optimization principle (Bolli, Renold and Wörter, 2018).

Innovation in the business area is associated with creation, development and implementation of new approaches (Straková, Kucharčíková, Pártlová and Váchal, 2016). An idea may be a novel recombination of old ideas, an invention that challenges the present order, or an unprecedented formula or approach (Shalley, Hitt and Zhou, 2015) and (Varkoly et al., 2016). Standard business innovations vary in several characteristics, such as level of novelty, size, complexity, or time period of development (Hrazdilová, 2009). Innovation is defined as both, the outcome of the creative actions and also the process that leads to the innovative solution (Valenta, 2001) and (Vokoun, 2017). Therefore, it can be said that *"an innovative outcome involves the successful application of new ideas, which results from organizational processes that combine various resources to the end. Its objectives are to produce positive results for organizations and their employees, customers, clients and partners – such as growth, profit, sustainability, and job security – with better and cheaper products for the customers, and personal satisfaction for its contributors"* (Dodgson, Gann and Philips, 2014, p. 5).

The classification of innovation provided different ways and styles investing and firm innovation, e.g. how to say authors (Christensen, 1997), (Al-Hakim and Jin, 2010), (Gericke, 2013), (Dodgson, Gann and Phillips, 2014) and (Sayili, Yilmaz, Dyer and Küllü, 2017). However, the innovation always leads to specific type of change that is integrated into the organizational structure and processes (Al-Hakim and Jin, 2010) and (Sroufe, 2017).

Contribution presented EU innovation policy, changes and new approaches in company Procter & Gamble. Procter & Gamble is an international corporation targeted on the production of various kinds of household products and services of every-day use, predominantly comprising detergents and fabrics, and cosmetic products. The company has been grounded in 1837 in United States and had become a globally established producer with a variety of brands since. The basic European single market sector, the company has been oriented on, comprised especially soaps, nowadays the portfolio includes also hygiene products or electronics which are supplied to more than 180 countries all around the world.

### ***1.1 Innovation Process and Changes***

Innovation process is a complex set of actions that aims on managing of the changes that are believed to lead in more profitable and customer-oriented solutions (Kim, 2017). The main focus of innovation management concludes several areas that can be defined as follows in (Dodgson, Gann, Phillips, 2014, p. 13):

1. dealing with disruption – unexpected events that have to be considered in terms of business that the organization has to take stand to through innovation,
2. integrating of innovation process – which is considered to be very diversified as it involves various parties into the development actions (contributors from the organization or outside with various type of occupation, skills, abilities, capabilities and knowledge),
3. managing intangibles – especially knowledge and intellectual property of the organization,
4. encouraging creativity and playfulness – in order to enhance the organizational performance.

Innovation processes and strategies about (Dodgson, Gann, Phillips, 2014), (Hrazdilova, 2009) or (Shalley, Hitt and Zhou, 2015) are defined in a various tools and approaches in accordance with the type of innovation involved.

### ***1.2 Innovative Ratings and Metrics***

Evaluation and control of innovation is a specific process focused on the determination of the impact of innovation on the potential profit of the organization. The common way of providing the metrics to the innovation process is stating of specific aspect of the innovation that is measurable. Often these kinds of measuring are focus on the financial aspects of the production and sales. However, the areas of innovation metrics can be considered very broad in terms of indicators, as the innovation can be provided in a range of operations included within the organizational structure (Christensen, 1997). The common purpose of utilization of the innovation metrics lies in the correlation of the impact of innovation on the internal and especially external business priorities of the organization. The measurements associated with the innovation are therefore useful to provide comparison of the organization in objective on following levels formulated (Trias de Bees and Kotler, 2011, p. 214-215) to other companies within the market sector and ranking among the competitors in order to put a value on the innovation capacity; two or more business units within the organization and measuring of the growth of innovation capacity over time, i. e. to provide the comparison to the previous state of the company's business.

The areas, the innovation metrics targets on are variable, however, they can be categorized according to the dominant aspect of the business and production / service providing of the organization. Within these categories can be included according to (Trias de Bees and Kotler, 2011, p. 216-221):

1. **Economic metrics** – the measuring of the impact of innovation on positive or negative results within the economic area of the organizations business the sales from the new (innovated) product launch – as a percentage of sales of the product to the overall sales in defined time period (commonly 3 to 5 years); profits from the launch of the new (innovated) product – the value for calculation considers only profits on the sales of new product as percentage of the whole profits in 5 years period; company sales from innovations other than the new product – the percentage of sales of other products on the whole amount of products sold; cost savings from innovation – measured in monetary units or a percentage of margin or EBITDA (earnings before interest, taxes, depreciation and amortization); total ROI in innovation – calculation of returns on all investments in innovation in stated time period.
2. **Intensity of innovation** – quantifies the actual value of innovation on the baseline of the product or portfolio before implementation number of patents – the actual number of intellectual property rights needed to be applied for the protection of the

- innovation; number of innovations in product, services, customer experiences, processes or business models – the count of innovations that are provided within stated time period; number of brands – is the marketing equivalent to the number of patents utilized especially in sectors with short-time life of the brand; number of ideas generated per year – calculating the number of all ideas including the ones that have not become an innovation project generated by the employees per year; number of innovation projects in the pipelines – monitors the counts of projects that are solved or within the company during stated period (commonly 3 years). The declining count signals the reduction of innovation in progress, number of on-going innovation projects – is count of projects that are going to be provided and predicts the intensity of innovation in the short-term period as well as the capability of the organization to carry out the projects simultaneously, investment in research and development – measured as a percentage of monetary units on the whole billings of the company per year.
3. **Effectiveness of innovation** – is a metrics considering the relation of profits on the use of all resources of the company (the ratio of inputs and outputs) success rate in new products – the percentage of all new products that prove successful, i.e. that are profitable or stable on the market. The successes of the product can be measured also by using extended criteria stated by the company itself; time to market – predominantly utilized in sectors and industries based on fast technological approach to the competitiveness. The measurements are calculated as a time period of the process of innovation development from the basic idea to the product launch; average investment per project – is an indicator calculating the total costs spent on the research and development projects divided to the count of innovations launched. The indicator is monitored per time period and states the effectiveness of costs on the competitiveness of the portfolio; average impact of investment per successful project – stated as the total investment in research and development divided to the total count of innovation projects (successful and unsuccessful); average expenditure on rejected ideas and projects – stated as costs spent on the projects that did not fulfil the objectives and indicates the capability of the company to halt the innovation projects before they achieve too high investments; number of years as the industry leader – is an indicator of the capability of the organization to innovate in a sustainable manner.
  4. **Culture of innovation is a category for measuring the creativity and widespread of innovative approaches** percentage of employees that produce innovative ideas – on the total count of employees; percentage of employees that assess ideas – on the total count of employees; rate of ideas per employee per year; percentage of time spent on innovation – the rate of working hours of participation on innovation projects on the total count of working hours of all employees per year; number of departments that innovate on an on-going basis; propensity of risk-taking – calculates the count of decision-making with stated level of risk.

## 2. Methodology and Objectives

The study of approaches and issues to the innovation process in Procter & Gamble will be divided into two specific parts – the theoretical and the analytical part – in order to verify stated hypothesis that stands: Intensity and efficiency of innovation contributes to measuring creativity and innovative approaches to the company portfolio.

The theoretical part will be therefore focused on two important topics comprising the characterization of innovation process; its approaches, European innovation policy, strategies and models; and the aspects of assessment with the focus on the metrics commonly utilized.

The analytical part will then after aim on the case study. The case study will be targeted on the complex innovation process within selected company and will evaluated the dependence of the models and strategies utilized in association with the topic on the basis of the economic metrics describing the impact of the innovations implemented.

The following methods were used in the theoretical and analytical part to analyse the present contribution: analysis, synthesis, comparison, observation, questionnaire and interview.

The analysis was used to elaborate the theoretical part of presented paper. We came from a critical analysis of information sources addressing the issue of innovation process. Through synthesis, we have summarized the most relevant information. We used international scientific monographs and contributions, the current date and resources, bringing the latest information about the innovations, changes and new approaches to building customer value in European Single Market. All scientific resources used are referenced.

The analytical part of the contribution is based on observations and interview. The observation took place from January to September 2017, and all Procter & Gamble's innovative product, services and branding strategy especially innovative ideas design were targeted, impacting the market and being noticeable by the mere eye of the customer or potential customer. The outcomes of the observation were summarized through a short questionnaire survey amongst the customers of the analysed company. The purpose of the questionnaire survey was to find out if customers are aware of the innovation activities of the company, whether they feel that innovation activities have a positive impact on them, what is their assumption that the innovation activities of the company are being realized. A questionnaire survey was conducted between 546 economically active persons with gender balance with a higher proportion of secondary-educated employees versus undergraduates in the ratio of 3/2 in the company Procter & Gamble in terms September 2017 in Uherské Hradiště.

An interview with the project manager of the company (man, age: 41, university education, praxis for 9 years with managing projects) in whose competence are innovative projects was used to understand and then describe the innovation process in the analysed company leading to the elaboration of the presented case study. This interview was held in October 2017 in Prague. This was an unstructured interview based on the findings of the questionnaire survey conducted among the customers of the analysed company.

By comparing and synthesizing the results, data and information, we have come to confirm the formulated hypothesis and to formulate suggestions and recommendations leading to the improvement of the present state of the problem solved. These outputs were submitted to the respondent project manager and subsequently to the management of the company and are presented in discussion and conclusion of the contribution.

### **3. New approaches in Procter & Gamble**

#### ***3.1 The Innovation Changes in Procter & Gamble***

The innovation policy within selected company has been built for more than 175 years and is continuously improved to comply with the state-of-the-art approaches utilized globally. The approach to the innovation management within the company has been for a long-time based on the fourth model those targets on the cooperation among the stakeholders of the organization, especially the consumers (via feedback) and suppliers in European Single Market. Such innovation policy is approach however relies on the establishment, maintenance

and improvement of the research and development department and its experiences and expertise. Since 2000, the company has adopted new approach in innovative process ideas identification open innovation changes. Open innovation is built, as it is cited (Ozkan, 2014), on the principle of utilization of external sources during the innovation process, as the expansion of information and communication technologies limits the capabilities of the closed research and development structure of organization to properly react on the changes of market conditions (Fernandes, Cesário and Barata, 2017). The concept of innovation strategy adopted by Procter & Gamble is characterized as a transfer from research and development to connect and develop. This means that the internal research and development department cooperates with the external experts and innovators outside the company in order to spread the innovation potential of the brands. The management of the innovation process, however stayed principally unchanged, the organizational structure has been only supplemented with the managerial approaches and strategies that lead the coordination among the internal and external experts.

Nowadays, more than 35 percent of new products of the company have originated outside the internal research and development department; however, the innovation process is still led and provided inside. For the initial phase of the innovation project development, the company has established an internet-based platform allowing the innovators to enter the proposals to innovation of the products and their solutions that are constantly analysed and implemented into the innovation process database to be considered as a further step in the development process. Moreover, the open innovation approach has been supported by the creation of partnerships between the company and other business or governmental bodies, including manufacturing, research, development, business, scientific centres and organizations and universities.

### ***3.2 The Innovation Process Evaluation and Implementation of Products/Services in Procter & Gamble***

The evaluation of the innovation process proposed and developed is provided in two basic key points. First of them is the assessment in the initial phase of the project. As the sources of ideas are very broad, the company has had to establish an organizational body that evaluates the potential of innovation proposals entered by the platform system, as well as within the partnerships enclosed. At this point, the evaluation is predominantly based on the combination of three areas of innovation metrics – the economic, intensity and effectivity indicators. On the basis of the indicators selected, each idea is evaluated in terms of the impact on the potential competitive and business growth of the company.

After the potential is approved on all three levels, depending on the source of the innovation idea, the company launches the innovation project either on the basis of managerial command or the partnership agreement. The start of the project is then after followed by the stating of project plan and schedule that is applied throughout the whole innovation process.

The evaluation of the innovation process is based predominantly on the level of economic and intensity metrics, and partially on the effectivity metrics (in terms of time-to-market indicator). The economic metrics comprise especially the monitoring of the investments into the research and development process and the overall comparison to the return on investment indicators. The intensity is measured on the basis of monitoring of the successfully launched new products during the stated time period.

This complex system of evaluation of the innovation in both key points, i.e. the idea transferring to the project and the aspects of the success of the project, are applied predominantly for the purpose of the selection of products with high potential of



implementation and quick ROI, and also the monitoring of project course in order to recognize the need for improvement to the project plan.

#### 4. Conclusion

Innovation management presents an important part of the managerial approaches within a global corporation, as the contemporary environment within all kinds of industrial and market areas is highly competitive due to the development of information and communication technologies that have significantly affected its nature. The creation and sustaining of the competitive advantage in EU countries is therefore strongly depended on the innovation strategy adopted that has to be continuously adjusted according to the consumer behaviour of the target customers.

The contribution of innovation process and the incorporated evaluation marketing strategy has been provided on theoretical and analytical level. The theoretical part has focused on providing a base for the further case study of selected enterprise and comprised the research on the topics of innovation and its position within the organizational structure, strategies and models commonly adopted within the organizations including the particular evolution of their historical development and the metrics predominantly utilized to provide the control and monitoring of the innovation process.

The analytical part has been then after targeted on the verification of stated hypothesis: **Intensity and efficiency of innovation contributes to measuring creativity and innovative approaches to the company portfolio.** This hypothesis has been confirmed.

For the purposes of the analysis, the EU innovation policy and strategy approaches of international corporation Procter & Gamble have been selected. The analysis has been primarily based on the general description of the company's business and target consumers, and as well on the specification of the innovation process that has been recognized as the open innovation concept adopted especially due to the conditions of the market environment within the target sector. The basic principle of this concept lies in the involvement of external experts to the process of innovative ideas design and their further development within the innovation process.

Such concept can be considered very demanding especially on the aspects of innovation evaluation and measuring as the potential count of the ideas gained this way can be very high. The first key point of the evaluation request has been recognized in the pre-initial project phase – the selection of the idea to be approved for implementation. The second key point of evaluation is stated within the actual innovation process based on the development of courses of defined indicators. The complex system of evaluation, i.e. comprising the combination of metrics in economic, intensity and effectiveness area, can be therefore considered highly necessary for the purposes of the growth and sustainability of the organization within the competitive EU market environment, as it provides the quick selection of the innovative ideas and recognition of their potential.

Basing on the results of the analysis, it can be concluded that the hypothesis has been verified. Without the complex evaluation system, the probably time-to-market indicator of the newly developed or innovated products would be continuously increasing alongside with the amount of innovative ideas, as the consideration in terms of one metrics are not sufficient for the purposes of innovation potential which is conditioned by the quality of human resources and the organization's capability to run more parallel innovation projects (Chowhan, Pries and Mann, 2017).

The key to future survival and competitive ability of businesses is the development of innovative, information and communication technologies and the ability to take positive changes, notably in customer care and customer value building, through innovative products/services. The company's competitiveness is the unique value of the products/services offered. Achieving a level of competitiveness is the main reason for choosing a successful business strategy.

The questionnaire survey conducted in September 2017 showed that website design, branding, customer and after-sales service updates (postage warranty expiration) changed, increased marketing budget, increased news coverage, news coupons, and sponsored events. Economically active employees have spoken out for innovative changes processes in company Procter & Gamble that they welcome.

Innovation measurability factors have been noted in the increased number of patents and published professional articles, reduced complaints and customer complaints, increased profit margins, increased number of new ideas for products/services/processes (economies of scale), but also suggestions and changes in personnel processes investment in training and recruitment of skilled workers with an emphasis on cross-curricular activities such as time management, MBO, assertiveness, social and diplomatic behaviour and negotiation, presentation and communication skills, purchasing negotiations, financial management for non-financial managers but strategic management).

The international company Procter & Gamble examines the process of collaborating on developing new products/services with local and national educational institutions to develop knowledge and ability to build partnerships with key suppliers (accelerating delivery of individual products/services, setting optimal payment conditions, support EU innovation policy and strategy win - win, close co-operation with vendor on acquisition credible and available information on new or upcoming products/services, an affordable innovation pricing policy); modifies, changes and innovates production, technology, business and marketing processes in EU countries (to compare prices with competitive e-shops, to monitor and confront the results with current competition, to submit and to propose non-traditional ways and forms of promotion (loyalty programs and competitions, discount coupons, commission system, alliance forms of cooperation); supports staff development personnel; adopts new organizational decisions; actively communicates about the particular needs and requirements of key customers, especially on the regional and local markets in EU countries; addresses potential customers through websites and social networks (visitor ratings). Looking ahead, Procter & Gamble should focus more on predicting, identifying opportunities and competitive threats, and on economic returns on investment. Furthermore, it should consider the calculation of the failure rate, for example, in the development or sales process, for example, by increasing revenue for a given segment over a defined period.

In order to change the trend of the EU's innovation policy, Europe needs to make the world's scientific excellence, removing barriers to innovation, such as market fragmentation, slowing down standards, over-patenting, inefficient public-private cooperation, low participation in innovation partnerships between European, and regional institutions and business entities, but also a low level of practical skills of peoples.

Investing in research, innovation and technological development, 3% of GDP would create 3.7 million jobs by 2020 and annual GDP would grow by € 795 billion by 2025. Reforms of EU Member States' education, research and innovation policies create a new space for job creation, the production of goods and services to ensure the sustainable growth of the EU economy.

## References

- [1] Al-Hakim, L. and Jin, Ch. (2010). *Innovation in business and enterprise: technologies and frameworks*. Hershey, PA: Business Science Reference.
- [2] Boscoianu, M., Prelipcean, G. and Lupan, M. (2018). Innovation enterprise as a vehicle for sustainable development – A general framework for the design of typical strategies based on enterprise systems engineering, dynamic capabilities, and option thinking. *Journal of Cleaner Production*. 172, 3498-3507.
- [3] Bolli, T., Renold, U. and Wörter, M. (2018). Vertical educational diversity and innovation performance. *Economics of Innovation and New Technology*. 27 (2), 107-131.
- [4] Christensen, C. M. (1997). *The innovator's dilemma: when new technologies cause great firms to fail*. Boston, Mass.: Harvard Business School Press.
- [5] Davids, M. and Frenken, K. (2018). Proximity, knowledge base and the innovation process: towards an integrated framework. *Regional Studies*. 52 (1), 23-34.
- [6] Dodgson, M., Gann, D. and Phillips, N. (2014). *The Oxford handbook of innovation management*. Oxford: Oxford handbooks.
- [7] Evans, S., Vladimirova, D., Holgado, M., Silva, E. A. and Barlow, C. Y. (2017). Business Model Innovation for Sustainability: Towards a Unified Perspective for Creation of Sustainable Business Models. *Business Strategy and the Environment*. 26 (5), 597-608.
- [8] Fernandes, S., Cesário, M. and Barata, J. M. (2017). Ways to open innovation: Main agents and sources in the Portuguese case. *Technology in Society*. 51, 153-162.
- [9] Gericke, M. H. (2013). Performance Measurement of Innovation. In: *Finance and the Performance of firms in science, education and practice*. Zlín: Tomas Bata University in Zlín, 243-254.
- [10] Gillis, T. L. (2006). *The ABC handbook of organizational communication: a guide to internal communication, public relations, marketing, and leadership*. San Francisco: Jossey-Bass.
- [11] Grubb, M., McDowall, W. and Drummond, P. (2017). On order and complexity in innovations systems: Conceptual frameworks for policy mix in sustainability transitions. *Energy Research and Social Science*. 33, 21-34.
- [12] Harris, T. E. and Nelson, M. D. (2008). *Applied organizational communication: theory and practice in a global environment*. New York: L. Erlbaum Associates.
- [13] Hrazdilová, B. K. (2009). *Řízení inovací*. Zlín: Tomas Bata University in Zlín.
- [14] Chowhan, J., Pries, F. and Mann, S. (2017). Persistent innovation and the role of human resource management practices, work organization, and strategy. *Journal of Management and Organization*. 23 (3), 456-471.
- [15] Kim, Y. (2017). The effect of process management on different types of innovations: An analytical modelling approach. *European Journal of Operational Research*. 262 (2), 771-779.
- [16] Kulyk, V. and Škodová Parmová, D. (2017). E-business Development: The Comparative Study of the Czech Republic and the Ukraine. *Deturope*. 9 (1), 80-110.

- [17] Özkan, K. M. (2014). *Handbook of research on small business and entrepreneurship*. Cheltenham: Edward Elgar.
- [18] Pianta, M. (2017). Innovation and economic change. *Economics of Innovation and New Technology*. 26 (8), 683-688.
- [19] Sayili, K., Yilmaz, G., Dyer, D. and Küllü, A. M. (2017). Style investing and firm innovation. *Journal of Financial Stability*. 32, 17-29.
- [20] Scott, D. M. (2017). *The New Rules of Marketing and PR*. Oxford: Wiley Publishing.
- [21] Shalley, Ch., Hitt, M., A. and Zhou, J. (2015). *The Oxford handbook of creativity, innovation, and entrepreneurship*. Oxford: Oxford library of psychology.
- [22] Schuhmacher, M. C., Kuester, S. and Hultink, E. J. (2018). Appetizer or Main Course: Early Market vs. Majority Market Go-to-Market Strategies for Radical Innovations. *Journal of Product Innovation Management*. 35 (1), 106-124.
- [23] Smith, A. C. T., Gilbert, D. H. and Sutherland, F. (2017). The explore-exploit tension: A case study of organizing in a professional services firm. *Journal of Management and Organization*. 23 (4), 566-586.
- [24] Slowak, A. P. and Regenfelder, M. (2017). Creating value, not wasting resources: sustainable innovation strategies. *Innovation*. 30 (4), 455-475.
- [25] Sölvell, I. (2018). Managers' silent whisper innovation involvement and role-modelling in service firms. *European Journal of Innovation Management*. 21(1), 2-19.
- [26] Sroufe, R. (2017). Integration and organizational change towards sustainability. *Journal of Cleaner Production*. 162, 315-329.
- [27] Straková J., Kucharčíková, A., Pártlová, P., and Váchal, J. (2016). Foreign direct investment and transport serviceability – a prerequisite for the development and stability of national and regional economies. *Nase more*. 63 (3), 204-210.
- [28] Trías de Bes, F. and Kotler, Ph. (2011). *Winning at innovation: the A-to-F model*. Basingstoke: Palgrave Macmillan.
- [29] Varkoly, L. et.al. (2016). Innovativeness and competitiveness of contemporary educational organizations. *Przykłady dobrych praktyk w biznese*. Toruń: Wydawnictwo "Dom Organizatora". 117-127.
- [30] Vokoun, M. (2017). Characteristics of the innovation activities of firms in Europe: a critical review of international differences. *Review of economic perspective*. 17 (3), 239-262.
- [31] Weintraub, A. E. and Pinkleton, B. E. (2015). *Strategic public relations management: planning and managing effective communication programs*. Abingdon: Taylor & Francis Ltd.

## Utilization of European Funds for Brownfields Regeneration

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### **Abstract**

*This article focuses on the issue of brownfields, especially on possible ways of obtaining funds for their regeneration. In the Czech Republic, according to expert research, there are 10-12 thousand abandoned buildings and complexes. Brownfields deal with the Ministries (the Ministry of the Environment, the Ministry for Regional Development and the Ministry of Industry and Trade), which offer the public and private sectors the possibility of obtaining funds for the regeneration of abandoned buildings and complexes. Another way to obtain financial support for brownfield rehabilitation is from European funds (The Business and Infrastructure Support Program, the Investment Plan for Europe and the Real Estate Program). The aim of this paper is to present possible ways of financial support for brownfield regeneration in the Czech Republic. The contribution will be based on examples of good practice of regenerated brownfields in the European Union, supported mainly by European funds.*

**Keywords:** brownfields, EU funds, European Union, regeneration, private sector

**JEL Classification:** O18, R11, R51, R58

### **1. Introduction**

Abandoned objects and areas or brownfields are nowadays a very serious problem not only in the Czech Republic. The term brownfields define each country, respectively these institutions in different ways. With the relative subsidence of settlements and sufficient free space, the definition primarily focuses on contamination such as Denmark. In addition, countries with a relatively high population density and larger areas have, in the definition of the term, mainly the development aspect of brownfields. These include countries such as Belgium, the Netherlands or the United Kingdom. The National Brownfield Regeneration Strategy (2008) or previously Alker (2000) define brownfield as the real estate property (land, building or ground) that is insufficiently utilized, neglected and might be also contaminated. These properties occur as remnants of industrial, agricultural, residential, military or other activities. It is obvious that nowadays when plenty of global, economic, social and environmental challenges that are linked to the sustainable spatial development of cities and municipalities are being solved. The problem of regeneration and re-use of brownfields might at least partially contribute to the solution of these problems (Krzysztofik et al, 2016). One of those primary problems is to reduce the undesirable increase of extent built-up areas on city limits to the account of the open landscape, when brownfields in inner cities are being abandoned and left unused (Maly and Mulicek, 2016). Indeed, boosting support for brownfield regeneration might also contribute to more sustainable development of cities and rural municipalities from the perspective of their physical compactness, generally to increase of social responsibility for our

behaviour and to follow environmentally friendlier tendency to prefer utilization of existing properties over those that are being built on greenfields (De Sousa, 2003). Laforzezza et al., who argue that “brownfield remediation requires special attention to ecological and visual preference effects because these areas are often derelict, undervalued, or misunderstood” (2008, p. 258), this paper takes the view that community perceptions of landscape quality must be systematically investigated and integrated in the regeneration schemes.

The EU is a heterogeneous unit with significant disparities between its Member States and mainly among their regions in many areas of the modern economy (Hančlová et al., 2015). European Union funds represent a tool for realizing European economic and social cohesion. It allocates funds to reduce economic and social disparities between regions. An important point is to efficiently use funds from European funds. The programming period 2014–2020 holds lots of opportunities to fund innovative ideas and projects. The architecture of European funds and direct grants continues to offer a wide range of funding opportunities in the EU Member States. However, funding is often not used effectively or it may be denied due to poor planning. The problem of brownfields in the countries is that these areas and objects are not economically competitive for regeneration compared to green areas without public intervention. The economic, environmental and social barriers present at the site frequently hinder returning brownfields to beneficial use. The European Union and its member states provide different public incentives to make brownfield regeneration more attractive but rarely consider their sustainability (Thornton et al., 2007).

## **2. Possible Ways to Fund Brownfields Regeneration**

Brownfields in the Czech Republic are mainly concerned with the Ministry for Regional Development, the Ministry of the Environment and the Ministry of Industry and Trade. The problem of abandoned buildings, facilities and their possibilities for regeneration is also addressed by the CzechInvest government agency, which supports the use of brownfields for business purposes. The government agency has developed a national brownfield regeneration strategy which estimates that there are approximately 11,700 abandoned buildings and sites in the Czech Republic that cover a total area of 38,000 hectares but an actual number and size may be larger (Turečková et al., 2017).

As part of the general perception of brownfield issues, a variety of funds and operational programs are being targeted to support the revitalization and regeneration of abandoned buildings and sites that can favourably affect not only the environment but also help preserve the architectural character of the site, in the midst of brownfield regeneration, the living standard of the population and the economic situation of the city or village where the brownfield is located. Regeneration of brownfields is a relatively expensive matter. It is often the case that each regeneration phase is funded from other sources. Funding entities have always same expectations, it is some kind of return on the funds injected. Funds for funding may come from investors, developers, banking institutions, such as grants and subsidies. Resources for regeneration can ultimately be combined.

The following part will be devoted to financial resources that can be used for brownfield regeneration and reclamation. The first of the possible sources for the renovation of buildings and areas is the use of bank loans. The owner (public or private) may apply to a bank for a revitalization or reclamation loan where it is adequate to provide the bank with any guarantee that ensures lower interest. Another possible way to raise funds is to fund the regeneration or reclamation of brownfields from the Structural Funds and the Cohesion Fund. In the case of brownfields in this case, there is a need to have set wider and more beneficial priorities in order to achieve structural funding from individual Operational Programs. Funds are fundamental

instruments for promoting social and economic restructuring in the European Union. They are primarily used to balance regional disparities and support regional development through infrastructure and telecommunications development, human resource development and R & D support. Another way to raise funds is to use national programs to restore abandoned buildings and areas. Each country has national funds to support national goals, which may include infrastructure development, social housing construction, health and education facilities development. Brownfields have some degree of flexibility in managing land, which is good for national funds. The next possibility of financial support is risk investments to brownfields. Investors require low or no guarantee, but aim for higher returns than banks. When investing in brownfields, the yield must be higher, the longer it takes to determine what is necessary to do.

### ***2.1 Financing Regeneration of Brownfields from National Programs***

The following subchapter will focus on possible ways of obtaining funds for regeneration of brownfields from national programs in the Czech Republic. In 2016, the National Program for the Support of Regeneration and Business Utilization of Brownfields was approved by the Ministry of Industry and Trade. The main objective of this program is to address the issue of brownfields occurrence in the Czech Republic. For the regeneration of brownfields, a financial amount from the state budget of CZK 2 billion is earmarked for the period 2017-2023. The regions and municipalities that are located in regions of structurally affected regions (Moravian-Silesian, Usti and Karlovy Vary Region) and the economically problematic regions according to the "Regional Development Strategy for 2014-2020" can apply for funding. Subsidies are provided through direct support. The financial support is provided up to 85% of eligible projects expenditure. The above support is intended for the regeneration and reconstruction of brownfields, their transformation into modern business entities and the creation of newly renovated business areas up to 10 hectares. Another national program dealing with brownfields is the program to support Business Real estate and Infrastructure. This program was launched in 2005 and has been extended until the end of 2020. Funds from this program can be used to eliminate environmental burdens or soil contamination on brownfields. Beneficiaries of the subsidy may be municipalities, associations of municipalities, regions, state enterprises, state contributory organizations and the state's organizational unit. The minimum amount of eligible costs is CZK 1 million, and the amount of support is up to 75%.

The Ministry for Regional Development has its own national programs to support rural development and rehabilitation, where funds can be earmarked for the restoration of abandoned buildings and sites. The financial means of these programs are very small compared to the total state budget funds, yet they can reduce regional differences. International programs provided by the Ministry for Regional Development is the Subprogram Support for Rural Renewal and Development. The program has several subsidy titles such as support for cooperation of municipalities for the reconstruction and development of the countryside, support for the restoration of small religious buildings in the municipalities, etc. Applicants have already received subsidies of CZK 481 billion, which were divided into 1022 projects.

### ***2.2 Financing Regeneration of Brownfields from European Funds***

Another part of the contribution will be addressed by the European Union Structural Funds, which can be used for the restoration of abandoned and dilapidated buildings or complexes. Programs are co-financed by the European Structural and Investment Funds for the period 2014-2020.

These programs are linked to the headings set at the national level, from which national development priorities and objectives are based.

The Operational Program Enterprise and Innovation for Competitiveness can be used from the initial programs. The aim of this program is to achieve a competitive and sustainable economy based on knowledge and innovations. Under this program it is possible to draw funds from the Real Estate subprogramme. The program no longer supports constructions of non-agricultural or farmer fields, but only the reconstruction of old buildings and their transformation into modern business premises. Part of it is a demolition of original buildings and subsequent construction of new buildings. Subsidies are provided for the modernization of spatially and technically unsuitable, energy-demanding buildings that can be reused for the development of production activities and services. The condition is that the reconstructed property is not located in the capital city of Prague. Overall, CZK 3.9 billion are earmarked for the Real Estate program for the period 2014-2020. At one object may amount of subsidy funds in CZK 1 - 50 million. The main objective of the Rural Development Program is to restore, preserve and improve the ecosystem dependent on agriculture through agri-environment measures, investment for competitiveness and innovation of farms, support for young people's access to agriculture or landscape infrastructure. This program focuses on rural development, agriculture and forestry. This is primarily a supplementary program, subsidies are not primarily aimed at revitalizing brownfields. The selection of the project can also be considered in terms of possible revitalization of brownfields in the sense of strengthening agrotourism.

The Operational Program Environment is aimed at reducing emissions, increasing energy efficiency and increasing the share of energy from renewable sources. Additionally, this program aims at contributing to the protection, preservation and development of natural resources of the European Union, the creation of a green and competitive low-carbon economy that is efficient use of resources and to protect citizens from environmental pressures and risks affecting their health and safety. The program primarily focuses on the remediation of seriously contaminated brownfields where risks to human health and ecosystems are proven. According to the author of the paper, the biggest problem is the contamination of soil and groundwater at former brownfields, formerly used for the heavy, manufacturing and chemical industries. Heavy contamination is expected here. For former agricultural buildings, the degree of pollution of soil and groundwater is moderate. The program for applicants for subsidies is set at € 2.6 billion. The area associated with the revitalization or recultivation of brownfields can be used up to 800 million Euros.

The following program on how to raise funds for this issue is the Integrated Regional Operational Program. This program aims to promote increased competitiveness and exploitation of the economic potential of the regions, mitigate the deepening of regional disparities, strengthen environmental sustainability and optimize the institutional framework for regional development. Brownfield projects are based on specific objectives (improving the quality of accessibility of services leading to social inclusion and enhancing community-led local development to improve the quality of life in rural areas and activation of local potential) implemented within the Local Action Group Local Development Strategy. The table below shows the amounts of funding for the regeneration of industrial and military sites that could be drawn from structural measures in the 2007-2013 periods. It can be said that from all the Member States of the European Union, the Czech Republic has the second largest financial support for the regeneration of industrial and military brownfields. During this period, EUR 372 million was allocated to the regeneration of brownfields after industrial and military activities in that country. The possibility of obtaining financial support for brownfield could be requested by business entities and municipalities. If entrepreneurs demonstrated economic activity, they could obtain funds for the regeneration of these buildings, mainly for



the reconstruction and remediation of the land. Eligible costs could include business entities as project documentation. In addition, municipalities could ask for subsidies, but their number was of little interest compared to the private sector. A total of € 3.3 billion has been earmarked for this period.

**Table 1: Regeneration of Industrial and Military Brownfields from Structural Measures**

Member state	Allocated amount (EUR)	%	Member state	Allocated amount (EUR)	%
Hungary	475 191 832	14.0	France	90 193 437	2.7
<b>Czech Republic</b>	<b>372 290 509</b>	<b>11.0</b>	Belgium	62 048 204	1.8
Germany	335 518 228	9.9	Latvia	49 000 000	1.4
Romania	316 430 710	9.3	Malta	48 280 000	1.4
Italy	298 335 961	8.8	Cross-border cooperation in the EU	47 801 926	1.4
Poland	278 413 953	8.2	Netherlands	28 799 000	0.8
Portugal	191 960 262	5.7	Greece	26 295 000	0.8
United Kingdom	178 957 047	5.3	Cyprus	16 150 000	0.5
Spain	177 403 701	5.2	Latvia	14 501 892	0.4
Estonia	138 045 325	4.1	Luxembourg	3 786 550	0.1
Slovenia	130 400 000	3.8	Finland	2 071 886	0.1
Bulgaria	108 322 014	3.2	<b>EU Total</b>	<b>3 390 217 437</b>	<b>100</b>

Source: European Court of Auditors

The following table shows the funds allocated to brownfield regeneration and the main Member States concerned. These are two program periods between 2000 and 2006 and the 2007-2013 programs, with Germany, the United Kingdom and France being the main beneficiaries for the first time. For the second period, they were among the largest beneficiaries of EU Member States that joined the EU in 2004. Among the first two countries with the largest allocation were Hungary and the Czech Republic.

**Table 2: Revenue from Structural Measures for Brownfield Regeneration**

	2000 – 2006	2007 – 2013
Allocated funds	<b>2,3 milliard EUR</b>	<b>3,4 milliard EUR</b>
Main recipients	Germany, United Kingdom, France	Hungary, Czech Republic, Germany, Romania.

Source: European Court of Auditors

### 3. Examples of Regenerated Brownfields

The following chapter will focus on examples of good practice of brownfield regeneration from an abroad, supported by funds from European funds.

An example of good practice is the regeneration of brownfields in Olomouc, which was financed from European subsidies and from the Regional Operational Program of the Central

Moravia Cohesion Region. This is the regeneration of a former sawmill in Olomouc part of Bělidla, formerly of Moravian-Silesian woodworking plants with an area of over 24,000 square meters (2,4 hectares). The revitalization started in 2014 and was completed in 2015. The revitalization of the brownfield was the transformation of the abandoned area into the construction of a shopping center, which will be spread over the area of 2.4 hectares. A shopping mall is a supermarket with smaller business units.

A subsidy from the European Union was granted for revitalization of the brownfield, amounting to a maximum of 60% of the total eligible expenditure. The remaining 40% is intended for the regeneration of the brownfield from its own sources of project financing. The table below shows the subsidies provided for the revitalization of the brownfield in Olomouc. Ineligible expenditure amounted to CZK 38 million. The total amount for the revitalization of brownfields in Olomouc was CZK 114 million, where CZK 45 million was mediated from the European Union, mainly from the Regional Operational Program of the Central Moravia Cohesion Region.

**Table 3: Financing Regeneration of Brownfields in Olomouc**

	Resources of the Regional Council - subsidies		Recipient own resources	
	Maximal CZK	Maximal in %	Minimal in CZK	Minimal in %
<b>Investment</b>	45 401 300	60%	30 267 534	40

Source: Revitalization brownfields, Olomouc

The following part of the chapter will focus on examples of good practice from abroad in the context of revitalization and regeneration of brownfields, which have been supported by funds from the European Union. The first example is a former mine in Belgium. This is the C-min in Genk where there were three mines that employed up to 7,000 miners in the 1990s. There are 65,000 inhabitants in the city and the mining mines are located in the immediate vicinity of the city. The area of all three mines with adjacent plots is 3.5 hectares. After the mining activities were completed, the site was revitalized and subsequently left unused. Rebuilding started in 2005 and the site was used from 2010, when the complex was rebuilt into a cultural and educational event. The total cost is around EUR 8.917 million, when the project was funded under the Limburg Objective 2 Program 2000-2006 and the Flanders RCE Program 2007- 2013. The reconstruction costs were financed not only from the city's own budget and programs, but also from the European Fund for Regional Development. Under this program, the brownfield regeneration amount was set at EUR 3.178 million.

Another example is the regeneration of brownfields in Poland, especially in the post-industrial area of Nowe Gliwice. The area of the building is 415.86 hectares and the total area of the brownfield is 97.9 hectares. This site was formerly used as a former coal mine in Poland. The regeneration of the brownfield was focused on building a business incubator, business zone and regional training. The implementation of the project was focused on soil remediation and reclamation. Another reconstruction of the site was the reconstruction of historic buildings after mining. An industrial zone for possible business units was also built. The total amount for reclamation and regeneration was EUR 24.2 million, where EUR 9.51 million was financed from PHARE and EUR 14.69 million from the local budget of Gliwice. The regeneration of brownfields took place from 2005 to 2009.

## 4. Conclusion

The issue of brownfields has been a very serious issue in recent years. Especially in West European countries, the professional public has been interested in this issue for several decades. In the Czech Republic, the brownfield phenomenon has been solved in the last 25 years. The revitalization of brownfields in EU countries has been dealt with since the 1960s and in the Czech Republic since 1990. The aim of the contribution was to identify possible ways of financing the regeneration of brownfields from national European funds. Nowadays, there are many ways to get money for the regeneration and reclamation of abandoned buildings and complexes. These funds can contribute to the development of individual cities and Member States in the European Union. The most abandoned buildings and areas are found mainly in the central and eastern part of Europe. The EU member states are trying to support the construction of various developmental and other business plans, mainly on brownfields. Abandoned buildings and sites are in some ways a weak point and a threat to towns and municipalities in the individual Member States where they occur because they reduce the development of the regions, especially their financial aspect of the public budget. On the other hand, it can be noted that the management of a used brownfield, which has a certain potential, can contribute to the development of the regions and increase not only the economic and living standards. The big issue is the ownership of abandoned buildings and complexes. The public sector has a better chance of regenerating brownfields than the private sector, as private owners do not have either financial means to regenerate or are not interested in rebuilding the brownfield. A possible way is combined ownership, which can contribute to cooperation and potential agreement to restore an abandoned building or complex. If a given owner (public, private or combined) brownfield decides to regenerate brownfields in cities or municipalities, and his potential intention is operational, he can achieve higher revenues than build the same plan on greenfields in the outlying parts of cities. The contribution included examples of brownfield regeneration in the Czech Republic and abroad. All of these examples have the same idea, namely to eliminate the occurrence of abandoned buildings or areas in the cities and to increase economic growth, the living standards of the population and, last but not least, the creation of new jobs. It is important to look at abandoned buildings and sites also from an environmental point of view, as contaminated brownfields can affect the quality of soil and water and can also be dangerous for local residents. These include, in particular, possible injuries and the risk of pathological phenomena. An important consideration for all EU Member States should be to avoid and eliminate other possible brownfield occurrences in individual countries and to prevent the construction of business and development projects on green meadows. Cities are about to grow in and not into the fields.

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## References

- [1] Alker, S., Joy, V., Roberts, P. and Smith, N. (2000). The definitiv of brownfield. *Journal of Enviromental Planninf and Management*, vol. 43, iss.1, pp. 49-69.
- [2] Cobraman (2017). *Renovation of the post-industrial area Nowe Gliwice*. [online]. [cit.2018-02-01]. Available at:[http://cobraman.vsb.cz/ProjectReport.php?BR\\_ID=17](http://cobraman.vsb.cz/ProjectReport.php?BR_ID=17).

- [3] Collier, M. J. and Scott, M. J. (2008). Industrially harvested peatlands and after-use potential: Understanding local stakeholder narratives and landscape preferences. *Landscape Research*, vol. 33, iss. 4, pp. 439–460.
- [4] CzechInvest (2018). *Financial support for brownfields*. [online]. [cit.2018-01-10]. Available at: <http://brownfieldy.eu/financni-podpora>.
- [5] De Sousa, C. A., (2003). Turning brownfields into green space in the City of Toronto. *Landscape and Urban Planning*, vol. 62, iss. 4, pp. 181–198.
- [6] EurActiv (2016). *Czech companies repair dilapidated buildings from EU money*. [online]. [cit.2018-03-01]. Available at: <http://euractiv.cz/clanky/evropske-fondy/ceske-firmy-opravuji-zchatrale-budovy-z-penez-eu/>.
- [7] Hančlová, J., Doucek, P. Fischer, J. and Vltavská, K. (2015). Does ICT Capital Affect Economic Growth in the EU-15 and EU-12 Countries? *Journal of business economics and management*, vol. 16, iss. 2, pp. 387-406.
- [8] Krzysztofik, R., Tkocz, M., Sporna, T and Kantor-Pietraga, I. (2016). Some dilemmas of post-industrialism in a region of traditional industry: The case of the Katowice conurbation, Poland. *Moravian Geographical Reports*, vol. 24, iss. 1, pp. 42-54.
- [9] Laforteza, R., Corry, R. C., Senesi, G. and Brown, R. D. (2008). Visual preference and ecological assessments for designed alternative brownfield rehabilitations. *Journal of Environmental Management*, vol. 89, iss. 3, pp. 257–269.
- [10] Maly, J. and Mulicek, O. (2016). European territorial cohesion policies: Parallels to socialist central planning? *Moravian Geographical Reports*, vol. 24, iss. 1, pp. 14-26.
- [11] Melecký, A. (2016). Changign of EU Project and Grant Management Approach in Response to New Trends of Programming Period 2014-2020. In *International Conferene on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 605-614.
- [12] Ministry of Industry and Trade (2017). *Program of regeneration and business use of brownfield*. [online]. [cit.2018-01-15]. Available at: <https://www.mpo.cz/cz/podnikani/dotace-a-podpora-podnikani/investicni-pobidky-a-prumyslove-zony/prumyslove-zony/program-regenerace-a-podnikatelske-vyuziti-brownfieldu---vyzva-i-2017--230611/>.
- [13] Monthly EU news (2017). *Brownfields in the Czech Republic*. [online]. [cit.2018-01-08]. Available at: [http://www.csas.cz/static\\_internet/cs/Evropska\\_unie\\_2017](http://www.csas.cz/static_internet/cs/Evropska_unie_2017).
- [14] PSJ (2015). *Revitalization brownfields, Olomouc*. [online]. [cit.2018-03-01]. Available at: <http://www.psj.cz/revitalizace-brownfields-pavlovicka-olomouc-i-etapa.html>.
- [15] Thornton, Gareth et al. (2007). The challenge of sustainability: Incentives for brownfield regeneration in Europe. *Environmental Science and Policy*, vol. 10, iss. 2, pp.116-134.
- [16] Turečková et al. (2017). How local population perceive impact of brownfields on the residential property values: some remarks from post-industrial areas in the Czech Republic. *Geographia Technica*, vol. 12, iss 2, pp. 2065-4421.

## **The Future of the European Union Integration Process: Based on the Some Social and Economic Characteristics**

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### **Abstract**

*The article focuses on the analysis of selected social and economic characteristics in order to assess the dynamics and state of convergence of the European Union. This process will be judged in the light of changes in socio-economic differences between today's Member States. The author sees it as essential that social and economic cohesion in the sense of reducing disparities is the right way to ensure the further development of European integration. The status, changes and mutual differences in the social and economic environment of the European Union's members are assessed using the following indicators: total fertility rate, crude rate of net migration, ageing index, female life expectancy at birth, GDP per capita in PPS, consumption of electricity per capita and human development index. Spatial dynamic typology is performed on all selected indicators using the cluster analysis method. The result is primarily evaluate the nature and weight of the process of social and economic convergence of the European Union countries after 1990.*

**Keywords:** cluster analysis, convergence, European Union, socio-economic differences, spatial dynamic typology,

**JEL Classification:** C46, J11, J13, J14, R23

### **1. Introduction**

We live at a time of profound and deep social and economic changes. In general, disparities in the world have long been deepening in all the basic pillars of human society development, for which we can regard the environment, human society and economic development. The main factor of the differences is the human society that is behind the deepening of the social and economic differences in the world. We can assume that the natural environment is a system superior to both the already mentioned systems, ie social and economic. However, we can not at least at the regional level ignore the strong impact of human activity on natural systems (eg, industrial activity, construction, transport, recreation, etc.). Major changes in the core fields of human life are related in particular to processes of globalization, integration and regionalization. These processes are most consistently spreading through economic development and then social development. Evidence of this is the existence of many dozens of economic integrations and a large number of bilateral economic agreements. However, today, a number of serious social differences can not be dealt without a wider and often even global approach. Let's mention the most serious areas for the sustainability of social and economic development:

- health area (civilization diseases, vaccination issues, health checks),
- demographic transition manifestations (population aging process, fertility reduction, family crises, growth of individuals' households, growth in social services, the need for sustainable social policy, differences in life expectancy, etc.),

- equality of gender (processes of feminisation, violence, marriage, partnership, etc.),
- the influence of religion on society's development (Christianity, Islam, atheism, etc.),
- security (protection of citizens' health and life, the right the personal protection, etc.),
- political environment (corporate governance, democracy issues, justice systems, personal freedoms, social policy, etc.),
- strengthening and deepening the industrialization process (new technologies, the production and consumption of electricity).

If, for many millennia, it was true that a better basic living conditions brought about a regional deepening of the complex organization of human society, it seemed that this potential had exhausted itself. Many globalizing effects point to the need to change the behavior of human society. This means changing the approach to solving spatial problems, political issues, social, economic and natural aspects. The current change in the economic environment, often referred to as the arrival of the Industry 4.0 phase, brings a whole new perspective on the relationship between the global and the regional level in the exploitation of the potential of new technologies. In the thousand years of historical development of our society, the key role of its development has played mainly the disintegration processes. As an example, we can point to the emergence of new states with better opportunities to manage the overall management of society, their social and economic development, including increased territorial security.

Certainly, the overwhelming majority of regional experts agrees that deep and deepening economic and social disparities lead to a decline in society's development and, above all, reduce the security of citizens themselves. The process of reducing imbalances in human society today can be considered very important. And this desirable process is certainly helped by the moments of globalization, integration and regionalization. That is why we decided to put the assessment of the European Union's integration process in relation to its future to the analysis of several selected moments of social and economic development of society. Based on a number of factors, we predict that a better future for Europe and European civilization is associated with deepening the process of co-operation within the European Union. We stand for this claim despite all the current serious crisis moments a referendum on the UK's departure from the European Union, the bad economic situation in Greece, the absence of a common migration policy, discrepancies in the area of forming a single monetary union, partial differences in the political culture of the members of the European Union with an impact on different approaches to the issues of social policy of the state, disintegrating state-building manifestations (Catalonia, Northern Ireland, Scotland) or political efforts to raise questions about the possibilities for leaving the European Union (eg referendum).

It is beyond question that under the current level of technological development in the world and especially in Europe deep economic cooperation is necessary. Social cooperation (social policy, social law, national issue, population issues, the position of men and women in society, migration policy, family policy, housing policy, etc.) and security are equally necessary. These two parameters are often the subject of expert debates on population growth and global stability and security in recent decades (Polunin, 1998).

Based on knowledge of demographic transition, and under the impact of economic development on reproductive behavior, we are of the opinion that the issue of population growth today is not the problem, but that the problem is deepening, or rather, not reducing economic and social disparities. Although the warning of population growth has often emerged from the period of economist T. R. Malthus (Newbold, 2007), we do not think that this is an important moment threatening the stability of human society. On the contrary, we see threats in the deepening of social and economic differences and the underestimation in this context of the essence of the integration process of the European Union as well.

## 2. Analytical Approaches to Studying Social and Economic Convergence

We have chosen to use the dynamic spatial typology method to monitor the convergence of the economic and social environment of the members of the European Union. With the current 28 members of the Union, we have taken the last 25 years for the time being, knowing that in 1990 only twelve members have been integrated. Further expansion in the period under review was in the following waves:

- 15 members in 1995 (Finland, Austria, Sweden);
- 25 members in 2004 (Czech Republic, Estonia, Cyprus, Lithuania, Latvia, Hungary, Malta, Poland, Slovakia, Slovenia);
- 27 members in 2007 (Bulgaria and Romania acceded) and
- 28 members in 2013 (Croatia joined).

It is true that our observation of the social and economic position of the current 28 members of the EU with the aim of showing the influence of the integration process in the sense of convergence of a large number of states has only been a very short history because of a significant expansion after 1990. However, that since 1990, the economic and social cooperation between today's EU countries has been very open and naturally deepening. In particular, due to significant political changes in favour of the democratization of the whole of Europe. We use hierarchical cluster analysis (Kettenring, 2006) to monitor convergence, which at the same time captures 25 years of changes in selected indicators for all 28 current members. The selection of suitable indicators was influenced mainly by the weight: demo-social phenomena, economic forces, living standards and availability and quality of the database.

When processing the data we rely on the data of the national statistical offices of individual European Union members and the Eurostat (statistical office of the EU). We process input data using the statistical and analytical software IBM SPSS (Statistical Package for Social Sciences). To measure the process of differences and the nature of convergence between EU members, we decided to use the agglomerative hierarchical cluster analysis method (Staničková, 2013), which objectively tries to cluster based on differences and similarities for larger clusters (Rupp, 2013). Before hierarchical cluster analysis, we use method of „centre moving average“ for three-year periods for better results.

We will analyse the demo-social environment using indicators that assess the demographic transition and the aging process: total fertility rate (partly complemented by natural increment assessment) and aging index (*AI*).

The indicator of total fertility (*TFR*) documents changes in the reproductive behaviour of the population. Its calculation means assessing the number of live births per woman for the reproduction age. At the value of indicator 2.1, the annual variation of the population size is actually zero by natural increase. It is therefore a stagnation zone. All EU countries are significantly below this level. We can judge the aging process very well by evaluating the aging index over a longer time horizon (Šotkovský, 2012). The formula expresses the number of seniors per hundred children (1):

$${}_{t}AI = \frac{{}_{t}P_{65+}}{{}_{t}P_{0-14}} \cdot 100 \quad (1)$$

We will monitor economic differences by analysing these indicators: crude rate of net migration (2), GDP per capita (PPS) and electricity consumption per capita.

While migration behaviour can also be considered as a manifestation associated with a demo-social environment, yet the crucial part of migration in the EU is economic migration.

$${}_tCRNM = \frac{{}_tNM}{{}_tP} \cdot 1,000 \quad \text{or} \quad {}_tCRNM = \frac{{}_tI \cdot {}_tE}{{}_tP} \cdot 1,000 \quad (2)$$

Gross domestic product per capita uses the EU methodology that works with the purchasing power standard (PPS, €). It is an artificially created currency unit for a more appropriate expression of the volume of economic aggregate indicators in the comparison of national economies. We obtain the data in PPS from the value expressed in national currency by dividing the relevant PPP. The per capita electricity consumption indicator shows the depth of industrialization and household consumption. The process of economic development is still linked to the increasing production and consumption of electricity.

Differences in the standard of living have been decided by:

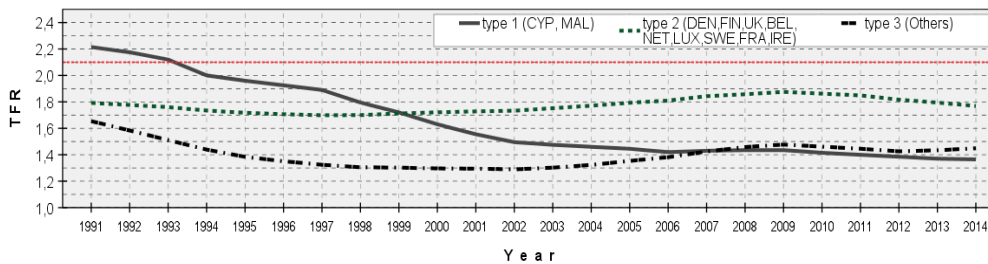
- female life expectancy at birth and
- human development index (*HDI*).

Because the length of life can be considered as an important expression of its quality, life expectancy at birth is often taken as an indicator of overall maturity. The Human Development Index is a UN tool for expressing the quality of human life by comparing lifespan, education and living standards.

### 3. Social Indicators and Convergence Process

We have selected two indicators to assess the change in demoesocial disparities in the EU population after 1990. The first is an indicator of total fertility rate.

**Figure 6: Spatial Dynamic Typology of Total Fertility Rate of the EU Member States**



Source: author’s calculations, based on Eurostat and national statistical offices data

From our analysis of behavioural changes over the last 25 years, it follows:

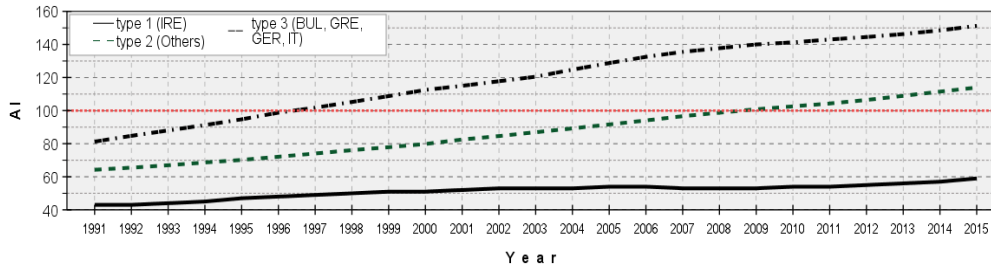
- Different behaviour in Cyprus and Malta has been changed to compare with the behaviour of most EU countries. Their present value is about 1.5 (total 19 states).
- However, the difference in this indicator has increased between the remaining nine countries (Denmark, Finland, UK, Belgium, the Netherlands, Luxembourg, Sweden, France and Ireland) and the group of 19 countries mentioned above. For the second group (type 2), the current value is up 0.3 on average. At the beginning of the 1990s, the difference was just over 0.1.

When assessing the aging process, it is clear that we have a total of three groups of differing behavioural states with a tendency to widen the gap. We can leave aside Ireland (type 1), where the aging process of own population is only at the beginning. The countries of Bulgaria, Greece, Germany and Italy have a faster dynamics of the aging process, where they are now around 150. The remaining 23 countries now have a very similar evolution of the aging process



with a current value of around 120. The value of the aging index for the European Union is today as a whole 121 (Šotkovský, 2017).

**Figure 7: Spatial Dynamic Typology of Ageing Index of the EU Member States**



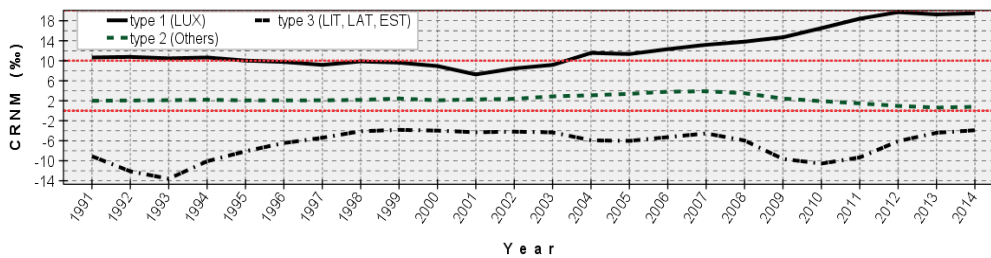
Source: author’s calculations, based on Eurostat and national statistical offices data

From the point of view of the changes in the measure of vitality and aging, it is obvious that for the vast majority the development is comparable without significant differences. Nevertheless, we note a slight increase in differences for both main groups. However, most EU members have very similar developments.

#### 4. Economic Differences Between European Union Countries

To assess the economic differences, we first chose international migration. It is a moment often associated with spatial behaviour, but in most cases the economic situation is the main impetus to international migration.

**Figure 8: Spatial Dynamic Typology of Net Migration of the EU Member States**

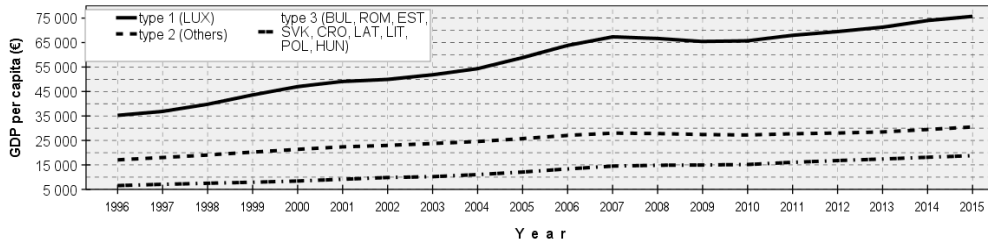


Source: author’s calculations, based on Eurostat and national statistical offices data

The migration behaviour of most European Union states (type 2, 24 states totally) is very similar in that the value of their migration growth is very low. Additionally, the crude rate of net migration indicator ranges from zero to 2 ‰. In essence, we can consider the values of the migration balance in Luxembourg on the one hand (annual increments of over 10 ‰) and the Baltic States on the other hand (migration decreases ranging from -4 to -14 ‰). Based on the analysis of the international migration of EU countries over the last 25 years (Šotkovský, 2016), we can emphasize:

- The growth of EU countries due to international migration has long been positive.
- We can label the growth rate as slow for 24 EU countries, if it does not exceed 2 to 3 per mille in the long run.
- Only three Baltic States have lost their own population due to the long-term greater emigration than immigration.

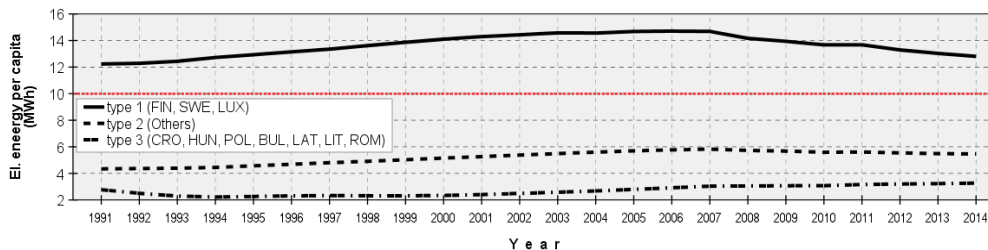
**Figure 9: Spatial Dynamic Typology of Economic Performance of the EU Member States**



Source: author’s calculations, based on Eurostat and national statistical offices data

The most widespread indicator for comparing the economic level or its performance is GDP per capita. Based on methodological recommendations, we have measured this indicator as GDP per capita adjusted to the PPS in euro. Here we can see very well the deepening gap between two large groups of states. Among the economically powerful, we can confidently include all member states from Western Europe (Austria, Netherlands, Belgium, Germany, France and Luxembourg) and Northern Europe (Denmark, Sweden, Finland, Ireland, UK), which is further complemented by some countries of southern Europe (Spain, Portugal, Malta, Cyprus, Slovenia and Italy) and the Czech Republic. The second smaller group of states with weaker economic performance consists of nine states (almost all of the eastern and central European countries). Even in this case, we cannot claim that the Member States are moving closer to reducing the differences in the indicators surveyed. On the contrary, even from all the indicators under review, the biggest deepening of the differences between the EU member states are shown here.

**Figure 10: Spatial Dynamic Typology of Electricity Consumption of the EU Countries**



Source: author’s calculations, based on Eurostat and national statistical offices data

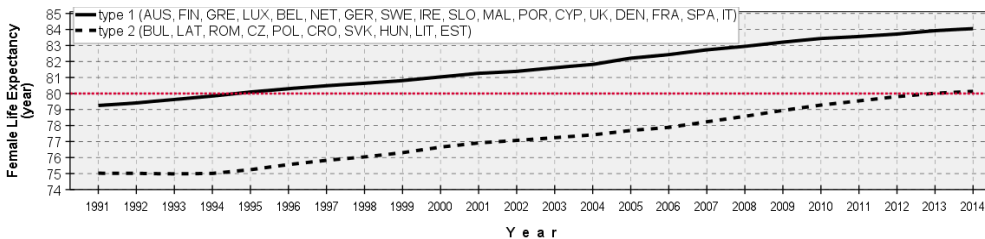
The last evaluated macroeconomic indicator was the electricity consumption per capita (MWh per year). Even in this case, there has been no significant reduction in the gap between the advanced European economies of Western and Northern Europe and the group of seven countries with the lowest electricity consumption (Croatia, Hungary, Poland, Bulgaria, Latvia, Lithuania and Romania) from Central, Eastern and Southern Europe.

### 5. Conclusion

For a comprehensive evaluation of the past 25 years of development and the near future of the European integration process, we have, besides the social and economic indicators, still reached the assessment of the expectation of female life expectancy at birth and the human development index. In both of these evaluations, we found that over the past 25 years, the economically weaker EU states have experienced a slight improvement in both economic and social levels after their entry. So far, we consider the differences in these two groups to be

significant. Therefore, we can consider them as an important cause of a number of problems not only of the process of convergence of the EU countries but also as a significant moment of slowing down the overall integration process within the EU. There are still differences in the life expectancy indicator for the birth of women in both groups (type 1 and type 2) around 4 years. Moreover, the division of states into two groups clearly reflects the greater overall maturity of the former Western European states since the Cold War.

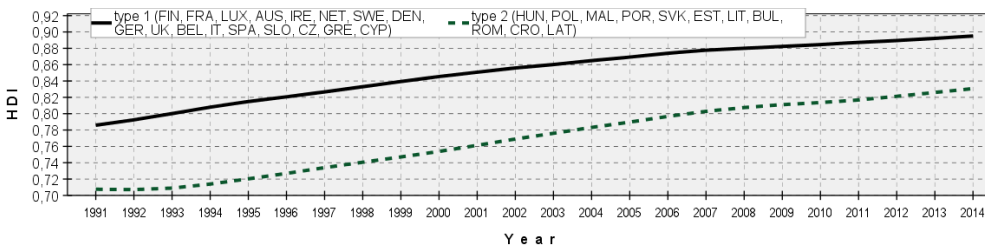
**Figure 11: Spatial Dynamic Typology of Life Expetancy at Birth of the EU Countries**



Source: author’s calculations, based on Eurostat and national statistical offices data

When analysing the HDI indicator, which partly incorporates life expectancy but is further complemented by the inclusion of the quality of the educational process and economic development, two basic groups are more distinct in the dynamic spatial typology. We can say that there is a high and clear match of spatial differences and the quality of the process, as well as the hope of female life expectancy. The only exception is the change of status of Malta, Portugal and the Czech Republic.

**Figure 12: Spatial Dynamic Typology of Human Development Index of the EU Countries**



Source: author’s calculations, based on Eurostat and national statistical offices data

The major problem of improving the integration process of the European Union remains, however, significant differences, especially at the economic level and in the overall development of the member countries (Melecký, 2013). These disparities have a negative impact on the deepening of the cooperation of the European Union members. At this time, it is not too favourable time for EU enlargement with new members, including the five candidate countries (Turkey, Macedonia, Montenegro, Serbia and Albania). Selected indicators for monitoring social and economic disparities among EU members would be appropriate to follow in the long term. They show us very well how the necessary process of convergence between the Member States is taking place. Their tracking shows that a slight convergence is going on, but there is still a clear distinction between a group of more developed countries and less developed EU countries. This is certainly frustrating for both groups and is in our view in the background of the current problems of deepening the development of integration and different views on current key moments (migration policy, social policy, etc.). The difference

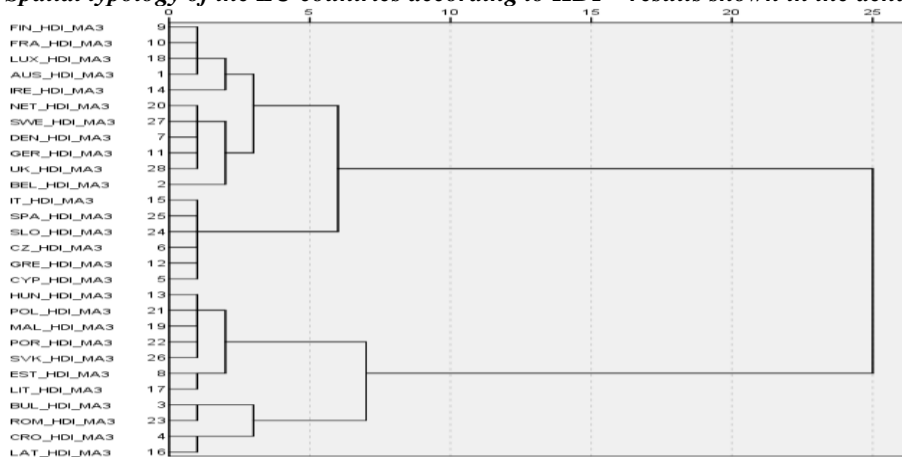
between the two groups is not so large in global scale but is sufficient for the development of internal co-operation in all major areas of life (economic, social, political and environmental).

## References

- [1] Eurostat (2018). *Statistics* [online]. [cit.2018-01-15]. Available at: <http://ec.europa.eu/eurostat/data/database>.
- [2] Melecký, L. (2013). Use of DEA Approach to Measuring Efficiency Trend in Old EU Member States. In *Liberec Economic Forum 2013, proceedings of the 11th international conference*. Liberec: Technical University of Liberec, pp. 381-390.
- [3] Newbold, B. K. (2007). *Six Billion Plus: World Population in the Twenty-first Century*. 2<sup>nd</sup> ed., Oxford: Rowman & Littlefield Publishers.
- [4] Polunin, N., ed. (1998). *Population and Global Security*. Cambridge: Cambridge University Press.
- [5] Kettenring, J. R. (2006). The Practice of Cluster Analysis. *Journal of Classification*, vol. 23, pp. 3-30.
- [6] Rupp A. A. (2013). Clustering and Classification. In Little, T. D. (eds). *The Oxford Handbook of Quantitative Methods*. Oxford: Oxford University Press, pp. 517-548.
- [7] Staničková, M. (2015). Classifying The EU Competitiveness Factors using Multivariate Statistical Methods. In *Procedia Economics and Finance*, vol. 23, pp. 313-320.
- [8] Šotkovský, I. (2012). The Change of the Population Size and the Ageing Process of the EU Countries after 1990. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 315-322.
- [9] Šotkovský, I. (2016). Regional Disparities of the Migration Behaviour in the European Union. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 987 – 995.
- [10] Šotkovský, I. (2017). Spatial Disparities of the Ageing European Union Population. In *International Multidisciplinary Scientific Conference on Social Sciences and Arts SGEM 2017*. Book 4, Vol 1, pp. 437 – 444.

## Appendix

### *Spatial typology of the EU countries according to HDI – results shown in the dendrogram*



# The EU Concept of Digital Economy Against the Internet Economy Model

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## **Abstract**

*The aim of the paper is to assess digital economy concept included in the Europe 2020 strategy in view of its consistency with the new Internet economy model and meeting challenges arising from the digital revolution. A holistic approach is taken. The literature on socio-economic changes brought about by the Internet is reviewed, as well as EU strategic documents are examined critically. The comparative analysis of assumptions and objectives of the digital economy concept against the Internet economy model is carried out. The main conclusion is that the Europe 2020 strategy doesn't assume any transition of European economy towards the Internet economy as a new socio-economic model and EU digital economy is being built on the traditional sources of growth, such as demand and competition stimulation. The ineffectiveness of the EU actions to improve its competitiveness is so far on a conceptual level.*

**Keywords:** digital economy, digital transformation, Europe 2020 strategy, European Union, Internet economy model

**JEL Classification:** E61, O20, O38, O52

## **1. Introduction**

The problems of deterioration of the EU competitive position are linked to the emergence and rapidly increasing pervasiveness of the Internet since the mid-1990s (Miller and Atkinson, 2014; van Ark, 2014, p. 11). Already at that time the EU had identified main challenges generated by new information and communication technologies (ICTs) and pointed out technological gap existing between the EU and the US or Japan (Commission of the European Communities, 1993, pp. 86-95; European Commission, 1994, pp.12-15). That prompted the EU to start intensive actions responding to the changes in socio-economic model. The endless documents, reports, surveys and studies prepared by the EU or commissioned by its institutions indicate still the same things: the huge potential of ICTs, the need to raise total factor productivity, innovation, competitiveness and economic growth. However, the evaluation of action has been taken so far at the EU-level to boost competitiveness drew largely negative conclusions. This raises the fundamental question about the reasons for those failures. Some various sources of inefficiency of the implementation of the joint programmes are identified, and amongst frequently cited are insufficient financial effort and weak determination of the Member States, despite their formal approval of these measures. However, the problem is likely to be of more complex nature due to disruptive changes in the society and economy development brought about by widespread use of ICTs and especially the Internet.

The beneficial impact of the Internet and other ICTs on an economy and in particular on economic growth has been confirmed by numerous research. The comprehensive review of

relevant research and studies are provided by ITU (2011), ITU and UNESCO (2011). Socio-economic consequences of technological developments in the ICTs field go beyond and are compared with changes brought about by industrial and prior agrarian revolution (Westerman, Bonnet, and McAfee, 2014).

### ***1.1 The Internet Economy – Theoretical Foundations***

The Internet economy is one of notions that has been put to label a new economic and social model. There are also other terms but none of them is commonly used. The name chosen here makes direct reference to the Internet which is widely regarded as a transformative technology due to its exceptional properties. The most distinctive characteristics of the Internet are as follows (Afuah and Tucci, 2003):

- interactivity – gives possibility to interact fast (in real-time), anyone to anyone (people, businesses, many-to-many, one-to-many, many-to-one, one-to-one) synchronously and asynchronously,
- universality - unlimited scope of access (anyone anywhere in the world),
- network externalities – the value of the Internet (and products based on it) increases as the more people (users) connect to it, e.g. the Metcalfe's law says that the value of network equals the square of the number of its users (Metcalfe, 2013) and according to Reed's law, this value grows exponentially (Reed, 2001),
- distribution channel of products and/or information about them – replaces the old channels and extends beyond the traditional constraints,
- time moderation – mitigate time pressure by shrinking and enlarging time,
- information asymmetry shrinker – increases transparency and access to the information for all parties concerned,
- infinite virtual capacity – the Internet gives a feeling of unlimited possibilities due to never ending technological advances in processing speed, storage, computing power etc.,
- low cost and open standard – virtually everyone can use it (cheap, open, easy to use),
- creative destroyer – it has the potential to transform the conditions of competition and whole industries (structure, conduct, performance), create brand-new ones,
- transaction-cost reducer – it is due largely to its properties listed above, and especially universality, distribution channel, low cost standard, and information asymmetry reduction.

The Internet with other ICTs are recognized as general purpose technologies (GPT). This is supported by studies carried out by Hempell (2006), Basu and Fernald (2006), Jovanovic and Rousseau (2005) or Clarke, Qiang and Xu (2015). The Internet should thus assume the features of GTP, which include, according to Bresnahan and Trajtenberg (1995): pervasiveness (spreading to most sectors), technological dynamism (improvement over time) and innovation spawning (complementarities with other forms of advancement). Moreover, the Internet as a network technology (a set of technologies, as a matter of fact) is viewed also as a 'disruptive' technology (Manyika, Chui, Bughin et. al., 2013). It means the capacity to transform the way of life, to change ways of doing old things and business and/or it enables doing things that were previously infeasible and, moreover, drastically alters the status quo by destroying current economic and social structures and creating new opportunities, including entirely new sectors. Thus, the Internet challenges the established order, brings in new types of firm, new business models and plays a profound role in the way in which social and economic activities are organized, coordinated and conducted. The even more important changes are in the behaviour and management of the economy than in the technology. These developments

naturally affect all socio-economic stakeholders, i.e. companies, people and governments. Taking into account Christensen`s (2016, p. 226) findings related to disruptive technologies, one of the factor which may lead towards failure in such circumstances is to rely on the markets demand, inasmuch as the first need is to find new markets. However, as Varian and Shapiro (1999) indicated, the demand side economies of scale are key in the economy driven by network effects, such as the case of information systems and Internet economy. So, the size of the market (demand) is crucial, but it refers mainly to the new products being placed on the new markets. In addition, Afuah (2013) argues that not only the size of network is relevant to its value, but also the structure of a network and the conduct of its users. This indicates the importance of the behaviour and quality issues for economic performance. All these points are in line with Brynjolfsson`s (1993) notice that current institutions and principles are outdated and thus can create bottlenecks in the ICTs adoption, and success in this matter must not simply involve overlay new technology on old processes. The general view of the changes induced by proliferation of information and communication network described Castells (1996), Tapscott (1995), Benkler (2006). They have pointed out, inter alia, influence of network technology on the breakthrough in the functioning of social networks, the whole society and individuals activity, creating diverse production models, such as peer, collaborative production or open innovations. The additional advantage of wide ‘social’ inclusion points out also Perez (2014, p. 7).

The transformation towards a new model is becoming a reality and it is necessary to define this term. The broad definition of the Internet economy laid down by the OECD (2012, p. 25) is as follows: ‘all uses and benefits resulting from the connectivity that the Internet provides’. Its precise interpretation may give rise to difficulties. Moreover, the Internet economy as a new emerging model can be incorrect understood through simple associations with technical progress and introducing new products (goods and services) that could then be brought down to only one sector concerns ICTs. Additionally, interpretation difficulties can be affected by certain simplifications assumed in the popular quantity studies into economic role of the Internet, in which a size of Internet economy is estimated on the basis of only the sector of activity directly linked to development and use of the Internet (such as hardware and software, providing Internet services, telecommunication and activity directly based on the Internet) (Deloitte, 2011, pp. 7-8; Rausas, Manyika, Hazan et.al., 2011, pp. 10-11; Cimochoowski, Hutten-Czapski and Rał, 2011, pp. 11-12).

The author (Talar, 2014) defines the Internet economy as the whole socio-economic system which:

- creates and develops the new industries (so-called ‘new’ economy or Internet/ICTs sector),
- changes the entire traditional sector to operate according to the new principles and create added value on the basis of broad network usage,
- uses the Internet as an open platform to involve all stakeholders in innovation and economic activity (irrespective of their functions in the economy, age, social status, education etc.),
- continuously develops network technologies, thus striving to further develop innovation in the field of Internet and new online technologies and their application.

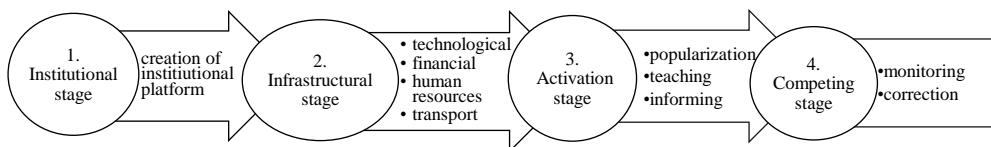
The Internet and related technologies are still evolving and their ubiquitous usage is constantly growing. Therefore, the full transformative impact of Internet is still to be defined.

## 1.2 Digital Transformation – the Challenges for States

The ubiquitous usage of the Internet, and its impact on virtually all areas of social and economic life, raises the need to apply the same approach (both multidirectional and comprehensive) to support transformations under way. Selective references to these challenges can lead to bottlenecks and hinder the changes, and further threaten efforts and resources have already invested in various actions. This calls for a balanced approach during transformation.

Profound changes in the socio-economic system triggered by digital revolution may occur automatically, but broadband gap and digital divide across the world suggest that it is not always the case. Some researchers have seen an active role of the state in the Internet economy creation and management process. Sukhodolov, Popkova and Kuzlaeva (2017) propose stepwise process of the Internet economy building with strong state interference at each stage (Figure 1). However, they suggest that when the new model will become widespread and start working, the role of the state should be minimised. While the sequencing of all actions of the state raises questions, it is notable that the need for the state involvement in the Internet economy establishment is seen and it includes not only traditional functions of the state, such as regulatory and infrastructure provider, but also the new one like a propagator of the Internet activity.

**Figure 1: Algorithm of Internet Economy Creation**



Source: author`s presentation based on Sukhodolov, Popkova and Kuzlaeva (2017).

The similar approach relating to the strong active role of the state in the Internet economy development is taken by Wu (2017). The main feature of ‘the new entity economy’ (as the Internet economy was called) is high integration of the Internet, virtual and real (i.e. traditional) economy. Its development is essentially dependent on the government involvement, for which many tasks were imposed. These include: innovating production service model, strengthening intelligent manufacturing, optimizing the network support system and strengthening different kind of financial support for enterprises. There is also expected direct state participation in the research and development activity as well as engagement in the promotion of application of all new solutions.

The proposal of Wang and Li (2017) is more far-reaching because it is going to reconstruction of planned economy system. The new economic system induced by digital revolution and called ‘plan-oriented market economy’ is a construct based on: both centralised and democratic planning, big data as a technical tool, platform economy as a institutional and organizational space and state-owned enterprises leading operated platform economy in the competition field. We may disagree with the assumptions of market socialism model, but we cannot defy the economic success of China to date.

The researches cited above explicitly and strongly point out that the new socio-economic environment needs strong state involvement, but the state interference has been controversial issue for a long time now. However, all the points lead to the conclusion that the states are now facing challenges at many different levels and areas. The actions they undertake to meet needs



arising from the current techno-economic reality determine future well-being of citizens. The characteristics of ICTs and their importance, and influence on all socio-economic aspects suggest that we need new institutions, new infrastructure, new behaviours, new organisational structures. The state has its own role to play in this transformation and its pace also depends on the involvement of governments.

## 2. Problem Formulation and Methodology

Taking into account deteriorating competitiveness of the EU in the Internet age and challenges of digital transformation, the research question formulated herein is whether European strategy matching with the new techno-economic environment. The aim is to assess EU digital economy concept in the Europe 2020 strategy in the view of meeting the challenges induced by the digital revolution. The new socio-economic model (called herein the Internet economy model) is the benchmark against which to evaluate. It's been hypothesized that one of reasons for the ineffectiveness of EU actions and measures towards improving its competitiveness has been rooted in the conceptual foundations of an adopted digital economy model and relates to the lack of a holistic approach to the concept of digital economy creation and assumptions about its main drivers.

The study is based on a review of the literature on socio-economic changes under ubiquitous Internet and research papers on digital transformation, critical examination of EU strategic documents and comparative analysis of assumptions of EU digital economy concept against the Internet economy model.

The theoretical background of this study is set out in the first section. Drawing on these, the main attributes of the Internet economy model have been figured out and adopted as the reference parameters. The characteristics of this new model and its creation have been captured in the three key criteria for the purpose of comparison and assessment of the consistency of EU digital economy concept with the Internet economy model. There are the following criteria:

- the very concept of the socio-economic model – in particular, whether it represents radical (disruptive, new quality) or incremental innovation and whether it represents holistic (concerning the whole society and economy, all aspects of life and business) or fragmented approach,
- the extent of the state's role in the digital transformation and the new economy functioning – is it just elimination of market distortions or a wide and deep government interference,
- the kind of government measures and areas their application – in particular which functions the state performs, i.e. the state plays as a regulator, investor, propagator, controller or market agent.

The analysis covers the very concept of improving EU competitiveness defined in the official strategy papers, the EU's approach to adapting to the impacts of digital revolution and actions to tapping the potential of ICTs, the digital economy's role in the whole Europe 2020 strategy and main assumptions and objectives of the digital economy concept under the Digital Agenda for Europe. The research ends with checklist preparation and conclusions.

## 3. Problem Solution

The EU's policy which clearly recognizes the challenges related to ICTs development was launched in December 1993 by publication of the White Paper called 'Growth, competitiveness, employment'. Notwithstanding its title, the growing problem of

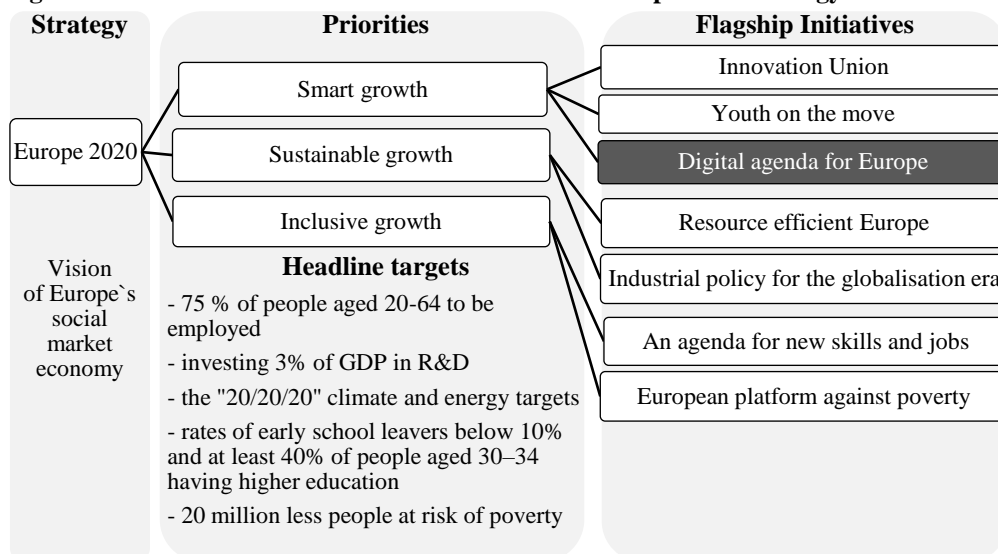
unemployment in the EU at this point was only of prime interest and concern (Commission of the European Communities, 1993, p. 9). The key role in overcoming this problem has been assigned then to development of the information society. The EU consistently included these issues in political agendas over the following years, seeking to create own socio-economic model, responsive to challenges posed by digital revolution and fitting ideas and values of the European social system, inter alia, determining equal opportunity for all citizens. However, continuous changes in rhetoric, unclear the very concept of information society and, primarily, its vague place in the Union's overall development strategy, the way of implementation and role in fulfillment the vision of European economy are criticized in analyses on the EU policy concerning development of information society from the beginning until the Lisbon Strategy (Feijóo, Gómez-Barroso and Karanitis, 2007; Servaes, 2003; Kaitatzi-Whitlock, 2000; Aulake, 1998). Therefore, the EU should have a strong incentive to change activity in this field and finally to develop a vision and strategy appropriate for the challenges of the Internet Age.

### ***3.1 Digital Economy in the Europe 2020 Strategy – a Holistic Approach***

The crucial difference between the Europe 2020 strategy and previous Lisbon strategy, which was aimed to make the Union 'the most competitive and dynamic knowledge-based economy in the world' (European Council, 2000) is the absence of the frame of reference (the benchmark) for the overall aim of current strategy. The priorities presented at the highest level in the Europe 2020 strategy relate first and foremost to the nature of economic growth (smart, sustainable, inclusive) and the areas of actions for achieving this (i.e. employment, innovation, climate and energy, education, poverty reduction), for which the levels of quantitative indicators were set out as headline targets to be accomplished in 2020 year (Figure 2). Taking the long term view, the objectives defined in this way are the backbone of any economic development, although it can be slightly different terminology used for them.

Actions under the key priorities of the Europe 2020 are addressed by seven equivalent so-called flagship initiatives. The role of ICTs and, in particular, the Internet is directly set out in the Digital Agenda (blacked out in Figure 2) listed in the Europe 2020 as third initiative to catalyse smart growth, understood in terms of strengthening knowledge and innovation as drivers of the EU's future growth. Seen in this light, it could be concluded that the exploitation of the potential of ICTs is not more important job for the EU than all other ones specified in remaining initiatives. Such a focus on the Internet (and more broadly ICTs) in development strategy could give rise to serious concerns in view of the challenges brought about by the digital revolution. This approach substantially differs from the essence of the Internet economy model.

However, if one looks carefully at the description of all other flagship initiatives, one notices that harnessing ICTs' potential is listed not only as one of many actions to achieve the priority of smart growth, but also, to some extent, to achieve the priority of sustainable growth. These issues are addressed in 'Resource efficient Europe' aimed to support the shift towards a resource efficient and low-carbon economy (European Commission, 2010b). It is also crucial that the competitiveness considerations are assigned to the sustainable growth priority and included in the initiative 'An industrial policy for the globalization era'. Moreover, there is also no clear hierarchy of targets and action, instead, their interrelatedness and representativeness are pointed out in this strategy (European Commission, 2010b, p. 9). The above, accompanied by very numerous and constantly varying targets which are communicated in many documents within each initiative, makes the overall strategy difficult to understand for an average European citizen.

**Figure 2: The Overall Structure and Content of the Europe 2020 Strategy**

Source: author's elaboration based on European Commission (2010b)

As it is seen in the case of the overall priorities of the Europe 2020 strategy, there is no focus on radical changes in modes of production, consumption, innovation and organization, and especially interactions among all stakeholders. There is no redefinition of roles of all economic and social actors. The preponderance of economic orientation (the goal of economic growth) and thus subordination of all other aims to this was also proved by the in-depth research (Verdegem and Fuchs, 2013).

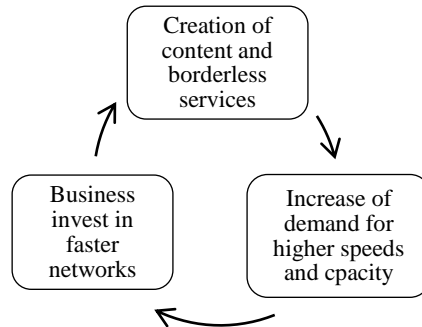
The introduction of the digital economy concept into the separate initiative (i.e. the Digital Agenda), but not at the level of primary priority in the Europe 2020 strategy means, in fact, that the digital economy is to be only a part of European economy rather than its equivalent. This is also acknowledged by separation the Internet sector from the whole economy and its treatment as distinct part (Hoorens, Elixmann, Cave et al.2012). All these reasons indicate a narrow, and therefore insufficient approach to the importance of Internet and related technologies for the economy and, as a result, a lack of clear adequate holistic vision of the European economy under challenging transformative circumstances. The EU is not intended to make profound changes towards the new socio-economic model (create the Internet economy par excellence), but seeks to improve or modernize its current model and attempts to adapt it to the new conditions. These efforts have not been successful so far.

### ***3.2 The Essence of Digital Economy under the Digital Agenda***

The Digital Agenda for Europe specifies how the EU, in fact, sees the potential of ICTs and, above all else, how intends to boost their use or maximize benefits for society and economy. According to this agenda, the activities for growth of the digital economy 'can be largely self reinforcing' and act as 'virtuous cycle' (European Commission, 2010a). Activating this mechanism can occur through providing attractive content and services at pan-European level (i.e. available in borderless Internet environment), thereby boosting demand for more advanced Internet infrastructure (higher speeds and capacity), and thus encourage the business

sector to invest in development of networks, and deployment of them in turn will open up new opportunities for innovations based on this networks (Figure 3).

**Figure 3: Virtuous Cycle of the EU Digital Economy**



Source: author's elaboration based on European Commission (2010a, pp. 4-5)

The adopted logic of the digital economy points out that the EU focus on the demand side of the economy, while people has been assigned a consumer role and their demand has to encourage the virtuous circle. This logic clearly shows how the concept of digital economy is different from the nature of the Internet economy model.

The very aim of the Digital Agenda is relatively difficult to identify, because in its introduction is stated that it is to reap economic and social benefits from digital single market, based on advanced Internet infrastructure and technical interoperability, but later on it is said that the objective is to maximize the social and economic potential of ICT, mostly the Internet. The consistence of aims described in this way will be ensured under just the assumption that completing the digital single market is the only basis for realizing benefits from the advances of Internet revolution. The resulting picture is that the EU has chosen the liberal approach towards digital transformation.

The justification for developing and implementing such a policy at the European level is existence of obstacles that distort or prevent from benefiting from digital single market. It has been found that digital (online) market is not implicitly included into internal market. The Digital Agenda shows seven types of impediments and presents measures to remove these limitations. The first three obstacles are mainly related to the regulatory frameworks. Their elimination, in fact, is the essence of completing the digital single market (as is the case for the internal market), the purpose of which is to ensure the free and safe flow and use of content and Internet services or services provided via the Internet. Two further obstacles relate to financial and technological issues, which include, in particular, inadequate investment in development of the Internet infrastructure and insufficient research and innovation efforts. The EU actions should be therefore focused on a provision of fast Internet access for all and generally raise expenditure on creation and commercialization of key technologies in the field of ICTs (such as the Future Internet). However, the financial instrument to pursue European policy objectives (i.e. Horizon 2020) is not designated for direct investment in infrastructure and research and development activity, but to private investment stimulation. The sixth obstacle concerns the human capital and indicates, first of all, a digital literacy deficit among citizen, while also points out shortage of appropriate IT specialists. The key measures adopted by the EU to resolve this problem are 'proposing digital literacy and competences as a priority

for the European Social Fund regulation (...) and developing tools to identify and recognise the competences of ICT practitioners and users (...)’ (European Commission, 2010a, p. 26). It is hard to find these actions as capable of addressing the key challenges that humans face meeting the new demands of ubiquitous digitisation. The last obstacle listed in the Digital Agenda concerns limited benefits from the use of ICTs and refers to weak use of all possibilities of these technologies for solving society problems (like climate change, an ageing population or integrating people with disabilities). However, it is questionable whether the latter obstacle should be considered in the same way as all other mentioned herein. Summing up, the actions under Digital Agenda are aimed at elimination of different kind of market distortions.

Moreover, the EU puts a strong emphasis on ensuring equal access to the Internet and possibilities to use it through acquiring appropriate e-skills (in particular, inclusion of persons disabled or socially excluded). This confirms that the principle of equality and convergence is deep-rooted in policies of the EU. There is no mention of educating and stimulating all citizens (Internet users) as producers and, in particular, as innovators (e.g. in response to social production model).

It can be inferred from the whole context of the Digital Agenda that the task of the European policy is to provide attractive content and services as well as to ensure conditions for frictionless functioning of virtuous cycle of digital economy in order to attain the benefits of the digital single market. Along with questions on rationale of the underlying assumptions for adopted vision of digital economy, it should be asked whether there was any coincidence in decision of use the virtuous cycle theory between the EU and the US when justifying the Internet’s openness (FCC, 2010). However, the debate on the virtuous cycle working in the US has been undertaken. Preliminary results of the empirical tests of the virtuous cycle theory application (Layton, 2014; Ford, 2017) show that:

- there is lack of positive effects (below expectations),
- there is no clear link between demand on Internet and investment in network infrastructure,
- it is questionable whether the virtuous cycle works in this area given that private firms traditionally didn’t invest in infrastructure.

Keeping above findings in mind, the key question is whether the virtuous cycle theory apply to the case in question. The more general one, what we should ask as the first is whether the genuine virtuous cycle need any intervention or regulation. So, the EU should thoroughly consider the rationales for development strategies set out at EU level. The actions taken forward under this strategy to date have not yielded expected results even in such crucial field as e-commerce, to which considerable importance is attached in the Digital Agenda and also in the new digital single market strategy launched in 2015 (European Commission, 2015). A large still unutilised potential of B2C e-commerce is confirmed, for example, by study carried out by Kunešová (2016).

### ***3.3 European Digital Economy Concept vs. New Internet Economy Model***

Drawing on submitted in the first section explanation of the Internet nature and the new socio-economic model interpretation, the Internet economy is characterised according to main criteria and attributes specifically worked out for this study (Table 1). In the same way the EU digital economy concept is stipulated in order to check their consistency. The basis for its characteristic is the above analysis of the holistic vision and essence of digital economy concept under the Europe 2020 strategy.

**Table 1: Checklist of the Consistency of EU Digital Economy Concept with the Internet Economy Model**

Criteria	Attributes	Internet economy model		EU digital economy concept	
		Yes	No	Yes	No
<b>Concept</b>	Radical new	x			x
	Upgraded		x	x	
	Holistic	x			x
	Fragmented		x	x	
<b>The role of state</b>	Elimination of market distortions only (passive)		x	x	
	Strong (active)	x			x
<b>State functions</b>	Regulator	x		x	
	Investor	x			x
	Propagator	x			x
	Controller	x		x	
	Market player	x			x

Source: author's elaboration

The differences between EU concept and reference model of the Internet economy are substantial. They are downright the opposite. Only two items are overlapped. The state in EU digital economy plays as regulator and controller, just like in the Internet economy model, but that is all.

#### 4. Conclusion

The digital revolution triggered the breakthroughs in virtually all areas of life, work, relations, and has led to the new socio-economic model (herein called the Internet economy model), where the role of human being in the economic processes and rules for value creation has been altered too. The literature review proved that the new environment imbued with ICTs requires also new institutions, new infrastructure, new behaviours, new organisational structures and the state has a proactive role to play in this digital transformation. The full utilisation of ICTs' potential requires profound and widespread changes towards the Internet economy model, and its creation needs holistic approach.

The EU also strives to take advantage of fast technological progress in the ICTs field and thus improve its competitiveness. This study of digital economy concept in the Europe 2020 strategy has found that:

- digital economy is treated as a certain part of European economy and actions in this field are not given higher priority than the all others set out in official policy documents,
- there is no focus on radical (disruptive) changes and digital economy does not constitute a new structure,
- digital economy creation is based on simple demand mechanisms (through inducing a highly dubious virtuous cycle) and competition stimulation, which are also expected to drive its economic growth - so it is liberal approach with minimum state involvement,

- digital economy, as well as the overall vision of Europe`s economy in Europe 2020 don`t sufficiently involve the whole society in process of value creation, and instead assign traditional role of consumers to citizens,
- digital economy concept is absolutely opposite to the Internet economy model, as such, it is not fit for the on-going digital revolution.

All of assumptions and objectives of digital economy concept and its place within the Europe 2020 strategy should be assessed negatively. The crucial issue is the lack of clear adequate holistic vision of the European economy under challenging transformative circumstances. Even if all measures and actions will be fully implemented, they are unable to meet the challenges and substantially change the EU`s position in the world economy.

The above conclusions are fundamental for individual EU Member States and should make them more aware that EU strategy provides for only continuation of the integration process by extending it for a new area created by the digital revolution (i.e. digital single market), instead of the establishment of completely new socio-economic structure able to meets the current challenges.

The study contains preliminary findings and further in-depth research should be undertaken, not only concerning the EU level but also individual economies and, in particular, proper model of economy functioning in the Internet age and its effective implementation. The role and functions of the state in ICTs-driven environment should also be carefully examined. It is desirable for future studies to take into account the experience of the leaders of digital transformation, as well as catching-up countries.

## References

- [1] Afuah, A. (2013). Are Network Effects Really All About Size? The Role of Structure and Conduct. *Strategic Management Journal*, vol. 34, iss. 3, pp. 257-273.
- [2] Afuah, A. and Tucci, Ch. (2003). *Internet Business Models and Strategies*. New York: McGraw - Hill Irwin.
- [3] Aulake, K. (1998). *A Study on the „Second Phase” of the Community Information Society Policy*. Copenhagen: Nordik Council of Ministers.
- [4] Basu, S. and Fernald, J. (2007). Information and Communications Technology as a General-Purpose Technology: Evidence from U.S Industry Data. *German Economic Review*, vol. 8, iss. 2, pp. 146-173.
- [5] Benkler, Y. (2006). *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. New Haven: Yale University Press.
- [6] Bresnahan, T.F. and Trajtenberg, M. (1995). General Purpose Technologies: ‘Engines of Growth’? *Journal of Econometrics*, vol. 65, iss. 1, pp. 83-108.
- [7] Brynjolfsson, E. (1993). The Productivity Paradox of Information Technology: Review and Assessment. *Communications of the ACM*, vol. 36, iss. 12, pp. 66-77.
- [8] Castells, M. (1996). *The Rise of The Network Society: The Information Age: Economy, Society and Culture*. Oxford: Blackwell Publishers.
- [9] Christensen, C.M. (2016). *The Innovator`s Dilemma: When New Technologies Cause Great Firms to Fail*. Boston: Harvard Business Review Press.

- [10] Cimochoowski, G., Hutten-Czapski, F. and Rał, M. (2011). Connected Poland. How the Internet is Transforming Poland's Economy. *Report*. Warsaw: The Boston Consulting Group.
- [11] Clarke, G.R.G., Qiang, Ch.Z.-W. and Xu, L.C. (2015). The Internet as a General-Purpose Technology: Firm-Level Evidence from Around the World. *Economic Letters*, vol. 135, pp. 24-27.
- [12] Commission of the European Communities (1993). Growth, Competitiveness, Employment – The Challenges and Ways Forward into the 21st Century. White Paper. COM(93) 700. *Bulletin of the European Communities, Supplement No. 6/93*. Luxembourg: Office for Official Publications of the European Communities.
- [13] Deloitte (2011). The Connected Continent. How the Internet is Transforming the Australian Economy. *Report*. Sydney: Deloitte Access Economics.
- [14] European Commission (1994). Report on Europe and the Global Information Society: Recommendations of the High-level Group on the Information Society to the Corfu European Council (Bangemann group). *Bulletin of the European Union, Supplement No. 2/94*. Luxembourg: Office for Official Publications of the European Communities.
- [15] European Commission (2010a). *A Digital Agenda for Europe*. COM(2010) 245 final. Brussels: European Commission.
- [16] European Commission (2010b). *Europe 2020. A Strategy for Smart, Sustainable and Inclusive Growth*. COM(2010) 2020 final. Brussels: European Commission.
- [17] European Commission (2015). *A Digital Single Market Strategy for Europe*. COM(2015) 192 final. Brussels: European Commission.
- [18] European Council (2000). *Lisbon European Council 23-24 March 2000. Presidency Conclusions*. Lisbon: EU European Council.
- [19] FCC (2010). *Open Internet. Report and Order*. Federal Communications Commission. Washington, D.C. FCC 10-201.
- [20] Feijóo, C., Gómez-Barroso, J.L. and Karanitis, E. (2007). More than Twenty Years of European Policy for the Development of the Information Society. *Networks and Communication Studies*, vol. 21, iss. 1-2, pp. 9-24.
- [21] Ford, G.S. (2017). Broadband Speeds Post-Reclassification: An Empirical Approach. *Phoenix Center Policy Perspective No. 17-07* [online]. [cit.2018-02-22]. Available at: <http://www.phoenix-center.org/perspectives/Perspective17-07Final.pdf>.
- [22] Hempell, T. (2006). Computers and Productivity. How Firms Make a General Purpose Technology Work. *Economic Studies*, vol. 33. Heidelberg: Physica-Verlag.
- [23] Hoorens, S., Elixmann, D., Cave, J. et. al. (2012). Towards a Competitive European Internet Industry. A Socio-economic Analysis of the European Internet Industry and the Future Internet Public-Private Partnership. *Report*. RAND Corporation.
- [24] ITU (2011). The Impact of Broadband on the Economy: Research to Date and Policy Issues. In: *Trends in Telecommunication Reform 2010 - 2011: Enabling Tomorrow's Digital World*. Geneva: ITU, pp. 23-83.



- [25] ITU and UNESCO (2011). *Broadband: A Platform for Progress. Report*. The Broadband Commission for Digital Development.
- [26] Jovanovic, B. and Rousseau, P.L. (2005). General Purpose Technologies. In: Aghion, P. and Durlauf, S.N. (eds.), *Handbook of Economic Growth*, Vol.1, Part B. Amsterdam: Elsevier, pp. 1061-1822.
- [27] Kaitatzi-Whitlock, S. (2000). A 'Redundant Information Society' for the European Union? *Telematics and Informatics*, vol. 17, iss. 1-2, pp. 39-75.
- [28] Kunešová, H. (2016). Multi-criteria Analysis of the Involvement of European Union Member States in B2C E-commerce. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 536-545.
- [29] Layton, R. (2014). Testing the Virtuous Circle of Innovation: Does it increase Broadband Investment? A Preliminary Discussion. *CMI Working Paper No. 4*. Center for Communication, Media and Information technologies (CMI).
- [30] Manyika, J., Chui, M., Bughin, J. et. al. (2013). *Disruptive Technologies: Advances that Will Transform Life, Business, and the Global Economy*. McKinsey Global Institute.
- [31] Metcalfe, B. (2013). Metcalfe's Law after 40 Years of Ethernet. *Computer*, vol. 46, iss. 12, pp. 26-31.
- [32] Miller, B. and Atkinson, R.D. (2014). *Raising European Productivity Growth Through ICT*. Washington, DC: The Information Technology & Innovation Foundation.
- [33] Perez, C. (2014). A Green and Socially Equitable Direction for the ICT Paradigm. *Globelics Working Paper Series No. 2014-01*. Aalborg University.
- [34] Rausas, M.P., Manyika, J. Hazan, E. et.al. (2011). *Internet Matters: The Net's Sweeping Impact on Growth, Jobs, and Prosperity*. The McKinsey Global Institute.
- [35] Reed, D.P. (2001). The Law of the Pack. *Harvard Business Review*, vol. 79, iss. 2, pp. 23-24.
- [36] Servaes, J. (eds.) (2003). *The European Information Society: A Reality Check*. Bristol, Portland: Intellect Books.
- [37] Shapiro, C. and Varian, H.R. (1999). *Information Rules: A Strategic Guide to the Network Economy*. Boston: Harvard Business School Press.
- [38] Sukhodolov, A.P., Popkova, E.G. and Kuzlaeva, I.M. (2017). *Internet Economy vs Classic Economy: Struggle of Contradictions*. Springer.
- [39] Talar, S. (2014). Building a Polish Internet Economy under European Union Membership (in Polish). *Unia Europejska.pl*, vol. 6, iss. 229, pp. 18-24 [online]. [cit.2018-02-22]. Available at: [http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-e2aadac1-6c7c-4fbb-907d-395696f27239/c/UE.pl\\_6\\_2014.18-24.pdf](http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-e2aadac1-6c7c-4fbb-907d-395696f27239/c/UE.pl_6_2014.18-24.pdf).
- [40] Tapscott, D. (1995). *The Digital Economy: Promise and Peril in the Age of Networked Intelligence*. McGraw-Hill.
- [41] Van Ark, B. (2014). *Productivity and Digitalisation in Europe: Paving the Road to Faster Growth*. The Lisbon Council and the Conference Board.

- [42] Verdegem, P. and Fuchs, Ch. (2013). Towards a Participatory, Co-operative and Sustainable Information Society? A Critical Analysis of Swedish ICT Policy Discourses. *Nordicom Review*, vol. 34, iss. 2, pp. 3-18.
- [43] Wang, B. and Li, X. (2017). Big Data, Platform Economy and Market Competition: A Preliminary Construction of Plan-Oriented Market Economy System in the Information Era. *World Review of Political Economy*, vol. 8, iss. 2, pp. 138-161.
- [44] Westerman, G., Bonnet, D. and McAfee, A. (2014). *Leading Digital: Turning Technology into Business Transformation*. Boston: Harvard Business Review Press.
- [45] Wu, H. (2017). The Countermeasure of Cultivating and Expanding New Real Economy. In *International Conference on E-commerce and Contemporary Economic Development (ECED 2017)*. DEStech Transactions on Economics, Business and Management. Xian, China, pp. 290-294.

## **Transparency in EU Trade Negotiations: Parallels and Differences Between TTIP and Brexit**

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### **Abstract**

*Transparency is one of the major issues in all current EU trade negotiations. The lack of an adequate level of transparency has been often emphasized by many stakeholders, mainly by civil society organizations. On the other hand, premature or extensive public disclosure of the content of negotiations could risk the loss of mutual trust between negotiating partners and ultimately cause the failure of the negotiating process. The most visible transparency issues have emerged during TTIP negotiations and are still emerging in the process of Brexit. In this article, we try to identify parallels and differences in transparency issues within TTIP and Brexit negotiations. The identified similarities and differences within both processes demonstrate the evolution from total secrecy to a high level transparency in EU trade negotiations. In the case of TTIP, the demand for transparency was an undesirable element causing complications, in the case of Brexit, transparency was used as a negotiating tactics for achieving EU's goals.*

**Keywords:** Brexit, EU trade policy, transparency, TTIP

**JEL Classification:** F13, F15, F62

### **1. Introduction**

For a long time, international diplomacy has been considered to be the domain of a small number of elite diplomats and political representatives whose activities were rarely known to the general public. This is especially true for international trade negotiations which usually deal with highly technical matters concerning issues such as import quotas, tariffs and other types of trade barriers.

However, the situation began to change with the development of advanced economic integration projects in European area such as TTIP (Transatlantic Trade and Investment Partnership). This project was planned to have a much bigger impact on the EU economy than any other free trade agreement negotiated by the EU in its history. Therefore, the TTIP negotiations have drawn much more public attention than any other EU trade negotiations. The civil society organizations began to complain about a lack of available information in the negotiating process and the European Commission was tackled with the problem of insufficient transparency within trade negotiations.

The second negotiating process which has drawn significant public attention is that of Brexit. The withdrawal of the United Kingdom from the European Union has caused a lot of worries about the future arrangement of EU-UK relations among British and EU citizens, as well as

among businesses. No other EU trade negotiations have had so much public attention and demands for a higher level of transparency than TTIP and Brexit.

The aim of this paper is to identify the similarities and differences in transparency issues between the TTIP and Brexit processes. To do so, we performed a comparative analysis of both processes which include a content analysis of position papers and an analysis of the statements from involved actors. We also performed a comparison of the extent of the disclosure of important documents for the public and a comparison of the attitude of the stakeholders towards transparency in trade negotiations. We tried to analyse the evolution of the EU transparency policy in trade negotiations but we did not examine the transparency policy of the USA and UK.

## 2. The Role of Transparency in EU Trade Negotiations

A significant number of people believe that the problem with a lack of transparency in EU policies execution began together with the TTIP negotiations. However, there were certain transparency issues even before the entry of the Lisbon Treaty into force in 2009. The openness of the EU institutions was set and defined in the Regulation 1049/2001 which states: *Openness enables citizens to participate more closely in the decision-making process and guarantees that the administration enjoys greater legitimacy and is more effective and more accountable to the citizen in a democratic system. Openness contributes to strengthening the principles of democracy and respect for fundamental rights. (...) Wider access should be granted to documents in cases where the institutions are acting in their legislative capacity, including under delegated powers, while at the same time preserving the effectiveness of the institutions' decision-making process. Such documents should be made directly accessible to the greatest possible extent.(...) The right of access also applies to documents relating to the common foreign and security policy...* ('Regulation (EC) No. 1049/2001', 2001)

However, Regulation 1049/2001 in article 4.1 protects the secrecy of the documents whose disclosure would undermine the protection of the public interest regarding, among others, the dimension of international relations ('Regulation (EC) No. 1049/2001', 2001). The legal cases judged under Regulation 1049/2001 (such as *Verein für Konsumenteninformation v. European Commission*, 2005 or *Access Info Europe v. Council of the European Union*, 2011) were related to the internal dimension of the EU policies only and did not have any direct connection to the external relations of the EU.

After the entry of the Lisbon Treaty into force, there have been three lead cases from European Courts that deal with the transparency in the context of international agreements. The first one is the case *Sophie in 't Veld v. Council of the European Union*. It was brought before court by Sophie in 't Veld MEP who received partial access to the opinion of the Council Legal Service concerning the recommendation from the Commission to the Council to obtain the authorisation for the opening of negotiations for the so-called SWIFT agreement. This international agreement deals with the processing and transfer of Financial Messaging Data from the European Union to the United States for purposes of the Terrorist Finance Tracking Program. The second was *Sophie in 't Veld v. European Commission* which was brought before court because of the decision of the European Commission to deny access to several documents relating to the Anti-Counterfeiting Trade Agreement (ACTA) negotiations. The third one was the case *Leonard Besselink v. Council of the European Union* concerning the draft Decision of the Council on a negotiating mandate which should authorise the Commission to negotiate the EU Accession Agreement to the European Convention on Human Rights (Leino, 2017). In all these cases the judging courts accepted the objections of the applicants although not fully and in the second case, the General Court *proved to be sensitive to considerations relating to*

*the need to protect EU strategic objectives and the climate of negotiations* (Leino, 2017, p. 10).

The first case related to the lack of transparency in trade negotiations prior to TTIP was *Stichting Corporate Europe Observatory v European Commission*. Stichting Corporate Europe Observatory questioned the decision of the European Commission to refuse to grant full access to several documents relating to the negotiations between the European Union and India, aimed at concluding a free trade agreement. The General Court dismissed the claim of the applicant citing article 4.1 of the Regulation 1049/2001, specifically the third intent of the article – international relations. This judgement was also confirmed in appellate procedure by the Tenth Chamber of the Court (Eur-lex, 2015).

In trade negotiations there must be rational place for transparency and secrecy at the same time. Too much public disclosure can lead to the loss of mutual confidence between negotiating partners and leaves little manoeuvring space to reach the compromise (O'Reilly, 2017). Negotiating parties are usually not able to achieve their goals when their negotiating positions are known to their opponent. On the other hand, a bigger level of transparency in trade negotiations creates a predictable environment which helps businesses to set their trade and investment plans. It also reduces the pressure from the public to the governments and in some cases allows the negotiating process to be more relaxed and easier to handle.

The question 'How much is enough?' is going to be crucial for future trade negotiations. The point is to find the balance between the transparency and the secrecy. In the context of the EU trade negotiations, the Regulation 1049/2001 leaves significant space for different interpretation of its exceptions. The exceptions under the article 4.1 do not include the public interest test, which requires the institution to consider whether the access to the documents should be granted despite the fact that their disclosure would be likely to cause harm (Leino, 2017). Therefore, the EU institutions can relatively easily refuse to provide access to many documents which should eventually be accessible for the public. However, in the recent trade strategy of the European Commission 'Trade for all', transparency is one of the main pillars of the proclaimed future EU trade policy (European Commission, 2015).

### **3. Evolution of the Transparency Policy in TTIP Negotiations**

The process of the formation of TTIP started in 2013 and since its very beginning it was a valuable experience for the EU. Unprecedented public interest forced the European Commission to significantly improve and increase the transparency of the negotiations and to upgrade its communication strategy as well. At the start of the negotiations, there was no plan about making public any of the important negotiation documents related to the TTIP. Only the publication of the EU position papers was under consideration (Coremans, 2017). The insufficient amount of the information about the content of the negotiations fuelled a lot of groundless speculations which accused both sides of hiding something. Shortly after the start of the negotiations 80 organizations from the EU countries and the USA sent a letter to the then presidents B. Obama, H. Van Rompuy and J. M. Barroso, complaining about the lack of transparency in the negotiations (Gheyle and De Ville, 2017).

The European Commission responded to this demands by publishing a brief paper explaining the actors involved and the procedures of the negotiations (European Commission, 2014). DG Trade also published a limited number of negotiating texts on the internet (Coremans, 2017). But the pressure from the public was still substantial, therefore European Ombudsman Emily O'Reilly launched two investigations into the EU Council and the European Commission over a lack of transparency around TTIP. She called on both institutions to publish EU negotiating

directives and to ensure timely public access to the TTIP documents (Crisp, 2014). In October 2014, the TTIP negotiating mandate was published by the Council. It was the first negotiating mandate which was published even with the negotiations still ongoing. In November 2014, European Commission started to elaborate a targeted strategy aimed at demystifying the content discrepancies and increasing the number of available information sources. DG Trade increased the number of published EU position papers and started to publish lists of all unclassified TTIP documents shared with the EU Council and the European Parliament. An important element of the strategy was the personal participation of Commission's officials on seminars, conferences lectures and other meetings. Communication through social media was equally important. During 2015, DG Trade increased the rate of publishing of different factsheets and explanatory materials, which clarified even further the EU negotiating positions and approaches (Coremans, 2017). During this stage, we witnessed significant improvement not only in the quantitative aspect but in the qualitative as well. The European Commission tried to popularize the whole TTIP project and made considerable effort to provide access not only to the hardly intelligible papers for the general public but also to the explanatory materials. This change of policy raised questions of whether it could compromise the Commission's negotiating tactics on problematic issues. American negotiators did not publish many documents related to the TTIP negotiations, thus their negotiating position was better than the EU's position.

European Commission presumed that explaining the basics of the TTIP project would attract a lot of positive voices and eventually lead to a higher public support. The lurking scepticism about TTIP was attributed mainly to the lack of knowledge. The European Commission tried to sell the project to the public by using the narrative of 'jobs and growth' which eventually proved to be inefficient, partially because of not very favourable economic prognosis about the future impacts of TTIP. The most cited study at that time predicted only 0,5% increase to the EU GDP in 15 years time (CEPR, 2013). The 'jobs and growth' narrative eventually collapsed because it could not compete with the catchwords of the anti-TTIP campaigners like 'chlorine chickens' or 'shady courts overruling states'. The European Commission then tried to shift the narrative towards transparency. The increased number of documents available since October 2014 helped in part the European Commission to improve its image. However, this improvement was mainly between the academics who could follow the negotiations in detail without much delay. Lobbying groups welcomed the increased number of available documents as well. Nevertheless, the anti-TTIP campaigners rejected the changes of the EU as cosmetic moves (Van Ham, 2016).

The European Commission then tried to popularize the agreement as the 'strengthening of the EU's voice in the world,' but this slogan was inefficient too. After that, the Commission officials acknowledged the Commission's limits in credibility and its ability to sell the outcomes of the trade agreements to the general public and called for a more active involvement of the member states (Van Ham, 2016).

At the time of writing this paper, the TTIP negotiations are stopped but the transparency issues still remain. Achieved level of transparency in TTIP is being applied to other trade negotiations of the EU. However, there is still the question about adequate balance between transparency and secrecy. The civil society organizations, unlike businesses call for the implementation of maximalist interpretation of transparency which demands publication of every single document by rule. Furthermore, the civil society organizations ask for more opportunities for an equal and meaningful participation on the process. Businesses, on the other hand, are satisfied with the current level of transparency (Gheyle and De Ville, 2017). Finally, the overwhelming pressure from the public did have some positive impact on the content of the negotiations. The European Commission began to design a new court for the investor-state

dispute settlement and with the 'Trade for All' strategy it tries to conduct a more proactive transparency approach towards the public (Van Ham, 2016). The results of this effort did not materialize into the TTIP negotiations but it did materialize into other EU free trade agreements like CETA (Comprehensive Economic and Trade Agreement) with Canada.

#### 4. Transparency in Brexit Negotiations

The process of Brexit started in 2016 following the referendum from 23 June which made a decision on the United Kingdom's leaving of the European Union. The result of the referendum triggered a significant number of discussions about the future setting of all different kinds of mutual relations between both partners. The main issue within the Brexit process is the choice about the future form of the UK's flexible exogenous integration with the European Union. The flexible exogenous integration could function on a level of a common market, or a customs union level or on a free trade area level (Kosír, Slobodníková and Orlická, 2016).

Brexit is a rather unprecedented process for which it is difficult to find relevant parallels in the past. Never before has the European Union negotiated a withdrawal of one of its full and most prominent members. The United Kingdom has been a member of the EU's customs union for 45 years and a member of the European Single Market since its foundation in 1993 (Vavrek, Ardielli and Gonos, 2016). The economies of the EU and the UK are closely interconnected and their future partition will have a significant impact on a number of businesses and EU citizens. Therefore, the transparency of Brexit negotiations is an important issue worth of a deeper analysis.

Brexit negotiations began after the TTIP negotiations have been stopped. The European Commission officials tried to settle the principles of Brexit transparency very carefully, not to repeat the mistakes made in the TTIP negotiations. In contrast with previous trade negotiations, the European Commission has since the very beginning pledged to provide a very high level of transparency of the negotiations. *The Commission, as European Union negotiator, will ensure a maximum level of transparency during the whole negotiating process. Commission negotiating documents which are shared with EU Member States, the European Council, the European Parliament, the Council, national parliaments, and the United Kingdom will be released to the public* (European Commission, 2016). Published documents include agendas for negotiating rounds, EU position papers, non-papers and EU text proposals. In May 2017, the Council of the EU created a document called *Guiding principles for transparency in negotiations under Article 50 TEU* which includes 9 principles and a scheme explaining the disclosure possibilities for every kind of document used in Brexit negotiations (Council of the European Union, 2017). Furthermore, the European Commission disclosed the composition of the negotiating team and its negotiating mandate, too. Moreover, all meetings with lobbying groups or individuals must be registered in special Transparency Register which is available for the public (Kendrick and Sangiuolo, 2017).

EU's communication strategy on Brexit proved to be sufficiently efficient and successful so far. First, this level of transparency helped to demonstrate the unity and strength of the 27 remaining member states. The release of negotiating positions documents obliges the member states to stick with the common stance and not to pursue their own interests. This is in big contrast with UK's several ideas about the future direction of Brexit. Second, EU's Brexit transparency helps to reinforce the legitimacy of the EU in a democratic context. Such high level of openness reinforces the belief that the EU can conduct negotiations in the name of the nations of Europe. And until now, nobody really questioned the legitimacy of the European Commission during negotiations. Third, transparency helps the EU to control the public narrative about Brexit (Kendrick and Sangiuolo, 2017). This was major issue during TTIP

process when the EU was not able to affect the public debate significantly. Brexit is different. The EU officials publish their negotiating positions and suggestions sooner than their British counterparts. The timing helps to shape the media discussions and British representatives are usually obliged to act reactively to the EU ideas and thus can not be so effective in the defence of their own ideas.

In addition, such a level of transparency helps to eliminate almost entirely the risk of leaks. The experience from TTIP has showed the real danger posed by leaks of important documents. Unauthorized leaks undermine the credibility of the whole system, bring distrust between negotiation partners and create mistrust in the public. Even the cooperation within one negotiating team could be hard in the case of a leak. And finally, a high level of transparency helps to avoid the risks in the economy coming from financial markets and uncertainty (Kendrick and Sangiuolo, 2017).

However, there are still some objections petitioning for an even higher level of transparency from the EU as was demonstrated by the most recent letter from European Ombudsman Emily O'Reilly to Jean Claude Juncker, President of the European Commission. The European Ombudsman welcomed and appreciated the progress made in transparency of the Brexit process but before the start of phase 2 of negotiations, she encouraged the Commission to publish a joint progress report for every negotiation working group after every negotiation round. In addition, the Ombudsman suggested that the disclosure of meetings with interest representatives should include not only the chief negotiator but the entire task force as well. Furthermore, she expressed the wish that some specific parts of the future draft withdrawal agreement should be available for relevant stakeholders (European Ombudsman, 2018).

## **5. Conclusion**

Both processes, TTIP and Brexit demonstrated a wide range of transparency issues within EU trade negotiations. TTIP as well as Brexit, aim to secure a very ambitious trade agreement whose impact on the EU economy would be much greater than any other EU trade agreement. This is linked to greater public interest in the agenda of the negotiations which was never witnessed before in any EU trade negotiations. The main difference in both processes was the role, which transparency played during the negotiation period. Whereas in the case of TTIP, transparency was an undesirable element causing complications, in the case of Brexit, transparency was used as a negotiating tactics.

European Commission does not want to repeat the mistakes made during the TTIP negotiation process anymore. It learned the lesson and have used a different approach in case of Brexit. Process of Brexit started with a higher overall level of transparency than the TTIP in its final phase. And since its very beginning, it constantly maintained the demanded level of transparency. On the contrary, TTIP gradually increased its level of transparency but never satisfied all the public demands for transparency. Brexit's level of transparency helped to demonstrate the unity of the EU, increase the legitimacy, eliminate economic uncertainty and probably the most important of all – shape the public narrative about Brexit. During TTIP, the public narrative was shaped mainly by civil society organizations through social media and the European Commission was unable to influence it any significantly. In Brexit, the public narrative has been shaped by the EU institutions and then was taken by media and various stakeholders on social media.

These two examples demonstrate both ways of the application of transparency in trade negotiations. The improper way and the proper way. The TTIP process provided a valuable experience about complicated transparency issues for the first time in EU's history. And the



Brexit process demonstrates that even a high level of transparency can lead to desired negotiating outcomes and that a high level of transparency does not necessarily lead to the downgrade of the negotiating position.

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### **References**

- [1] CEPR (2013). *Reducing Transatlantic Barriers to Trade and Investment An Economic Assessment Final Project Report* [online]. [cit.2018-02-26]. Available at: [http://trade.ec.europa.eu/doclib/docs/2013/march/tradoc\\_150737.pdf](http://trade.ec.europa.eu/doclib/docs/2013/march/tradoc_150737.pdf)
- [2] Coremans, E. (2017). From Access to Documents to Consumption of Information: The European Commission Transparency Policy for the TTIP Negotiations. *Politics and Governance*, vol. 5, iss. 3, pp. 29-39.
- [3] Council of the European Union (2017). *Guiding principles for transparency in negotiations under Article 50 TEU* [online]. [cit.2018-02-27]. Available at: <http://data.consilium.europa.eu/doc/document/XT-21023-2017-INIT/en/pdf>
- [4] Crisp, J. (2014). *EU Ombudsman demands more TTIP transparency* [online]. [cit.2018-02-25]. Available at: <https://www.euractiv.com/section/public-affairs/news/eu-ombudsman-demands-more-ttip-transparency/>
- [5] EUR-LEX (2015). *Document 62013CJ0399* [online]. [cit.2018-02-24]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A62013CJ0399>
- [6] European Commission (2014). *We're listening and engaging* [online]. [cit.2018-02-25]. Available at: [http://trade.ec.europa.eu/doclib/docs/2014/march/tradoc\\_152276.pdf](http://trade.ec.europa.eu/doclib/docs/2014/march/tradoc_152276.pdf)
- [7] European Commission (2015). *Trade for All: Towards a more responsible trade and investment policy* [online]. [cit.2018-02-24]. Available at: [http://trade.ec.europa.eu/doclib/docs/2015/october/tradoc\\_153846.pdf](http://trade.ec.europa.eu/doclib/docs/2015/october/tradoc_153846.pdf)
- [8] European Commission (2016). *The European Commission's approach to transparency in the Article 50 negotiations with the United Kingdom | European Commission* [online]. [cit.2018-02-27]. Available at: [https://ec.europa.eu/commission/brexit-negotiations/european-commissions-approach-transparency-article-50-negotiations-united-kingdom\\_en](https://ec.europa.eu/commission/brexit-negotiations/european-commissions-approach-transparency-article-50-negotiations-united-kingdom_en)
- [9] European Ombudsman (2018) *Letter from the Ombudsman to President Juncker concerning securing appropriate stakeholder input in the Brexit negotiations and potential for further progress on transparency* [online]. [cit.2018-03-05]. Available at: <https://www.ombudsman.europa.eu/cases/correspondence.faces/en/90192/html.bookmark>
- [10] Gheyle, N. and De Ville, F. (2017) How Much Is Enough ? Explaining the Continuous Transparency Conflict in TTIP. *Politics and Governance*, vol. 5, iss. 3, pp. 16–28.

- [11] Kendrick, M. and Sangiuolo, G. (2017). Transparency in the Brexit negotiations. A view from the EU and the UK. *Federalismi*, vol. 15, iss. 18, [online]. [cit.2018-03-02]. Available at: <http://www.sipotra.it/wp-content/uploads/2017/09/Transparency-in-the-Brexit-negotiations.-A-view-from-the-EU-and-the-UK.pdf>.
- [12] Kosír, I. and Slobodníková, I. and Orlická, J. (2016). The Most Important Factors of Efficiency of Flexible Exogenous Integration to the EU on Ukrainian Example. *Politické Vedy*, vol. 19, iss. 2, pp. 177–207.
- [13] Leino, P. (2017). Secrecy, Efficiency, Transparency in EU Negotiations: Conflicting Paradigms? *Politics and Governance*, vol. 5, iss. 3, pp. 6-15.
- [14] O'Reilly, E. (2017). EU Institutional Politics of Secrecy and Transparency in Foreign Affairs: A Commentary. *Politics and Governance*, vol. 5, iss 3, pp. 91-93.
- [15] *Regulation (EC) No. 1049/2001* (2001). [online]. [cit.2018-02-23]. Available at: [http://www.europarl.europa.eu/RegData/PDF/r1049\\_en.pdf](http://www.europarl.europa.eu/RegData/PDF/r1049_en.pdf)
- [16] Van Ham, P. (2016). *Communicating TTIP* [online]. [cit.2018-02-26]. Available at: [https://www.clingendael.org/sites/default/files/pdfs/Policy Brief Communicating TTIP - March 2016.pdf](https://www.clingendael.org/sites/default/files/pdfs/Policy%20Brief%20Communicating%20TTIP%20-%20March%202016.pdf)
- [17] Vavrek, R. and Ardielli, E. and Gonos, J. (2016). Members of the European Union as a Single Economic Unit and its Spatial Autocorrelation. In *International Conference on European Integration 2016*. Ostrava: VŠB - TU Ostrava, Faculty of Economics, pp. 1060–1067.

## **The Role of Public Administration and EU in the Context of Brownfields**

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### **Abstract**

*This paper is based on the characterization of the role of public administration regarding the problem solving of brownfields, especially in relation to its regeneration. The regeneration of abandoned and unused areas and buildings has been recognized as a key instrument in the sustainable land management. The conversion of brownfields is more effective and should be more acceptable to the public than the utilization of free developable land because of scarce and more expensive resource, especially in densely populated areas. That is why it is necessary to engage the public administration in cases in which the private sector is failing. This paper summarizes some of the selected tools of the public administration for problem solving of brownfields, and particularly defines the instruments of financial nature including the possibility of financing from EU funds (European Structural and Investment Funds and other) as well. Standard secondary data are used and combined with data from primary research carried out in relation to this subject in the city of Karviná (Moravian-Silesian Region, Czech Republic).*

**Keywords:** *brownfield, EU, public administration, public interest, public sector*

**JEL Classification:** *O18, R11, R51, R58*

### **1. Introduction**

The issue of brownfields has been recently coming into focus also due to the voluntary and forced activation of institutions of the public administration. It very often relies, beside other things, on the relevant tools for problem solving of the European Union. Brownfields are perceived in the context of the modern attitude and in relation to the economic development and current dynamic intensification of the life quality as a significant, yet specific element of the land development and spatial arrangement of the cultural-natural environment. Taking this into consideration, brownfields and the areas related to them should be in the interest of the representatives of the public and state administration, who by means of their activity and cooperation with other subjects are able to utilize the potential of brownfields to their maximum extent. The presented contribution thus focuses on defining the role of the public administration and the EU in relation to brownfields.

Brownfields refer to any land or premises which have previously been used or developed and are not currently fully in use (...) may be vacant, derelict or contaminated (...) therefore not necessarily available for immediate use without intervention (Alker et al., 2000). Brebbia et al. (2006, p. 40) define brownfield as: „any land or buildings, which have previously been used and which are now vacant or only used partly. They may be vacant, derelict or contaminated.

*That is why brownfields cannot be used immediately without any intervention.*“ Brownfields thus represent a significant environmental and social issue, and its solution is being reflected in the social-cultural development of the given level of the government (Greenberg et al., 2000; De Sousa, 2003; Thornton et al., 2007 or Williams and Dair, 2007). The formation of brownfields is usually generated by the economic-social factors stipulated in the branch-sectoral changes of industrial activities, always referring to the given area and the analysed object or phenomenon. The effects of brownfields with predominantly negative externalities are then manifested in the social sphere (social-pathologic phenomena or unemployment – Kunc et al., 2014 or Turečková et al., 2017a), economic (e.g. the price level of the properties in the brownfield surroundings is affected by them – Sun and Jones, 2013 and Turečková et al., 2017b), in the environmental sphere (in relation to the potential contamination and ecological pollution of built up areas and brownfields surroundings) or in urban or organization sphere (Frantál et al., 2013). All of the above mentioned is also reflected in the degree and the structure of the intervention of the institutions of public administration and self-government of problem solving relating to the brownfields existence. According to the study for brownfields localization (CzechInvest, 2008), there were 2 355 brownfields with the total area of 10 326 hectares in between 2005 and 2007 in the Czech Republic. Yet, the qualified estimates present us with the total number of 12 000 brownfields with an area of more than 38 000 hectares, while their number has been slightly decreasing since the 1990s (Rydvalová and Žižka, 2006). Thus we can claim that there is no such municipality in the Czech Republic without at least one brownfield in its cadastral area. Information on the assets of municipalities is presented primarily in the financial statements on the balance sheet (Kršková and Pakšiová, 2015). Based on the research carried out in the municipalities of the Moravian-Silesian Region, at least 80 % of their citizens are bothered by the existence of brownfields, and so it is in the public interest to solve the brownfield issue (Turečková et al., 2017a).

## **2. Problem Formulation and Methodology**

Brownfields are an issue for all municipalities and cities (further on, may the municipality and the city be perceived as a synonym), as they are their integral part. Besides their spatial connection, the brownfields are also connected to the municipalities functionally and visually. The derelict brownfields according to Kadeřábková and Piecha (2009) bring down the attractiveness of the municipality (it is then associated with a notion of degradation of the given area), which is then being transformed into an advantage to some extent. From the urbanistic point of view, the unutilized areas may be perceived as a restriction of disposable sources in a municipality with a direct link to the public budget. Reutilization of these abandoned localities improves the life quality of all actors due to a decrease in the criminality and socio-pathologic phenomena, an improvement in the local environment, an increase in land and area value, an increase in the perceived value of the neighbouring properties and an increase of the attractiveness for entrepreneurs (Hollander et al., 2010).

The intervention towards problem solving of brownfields must also respect the diverse localization of brownfields in different parts of the municipalities, in the so-called concentric zones (Park and Burgess, 1925). There is a consensus in the expert literature that brownfields represent barriers in the current structure of the cities, which then restrict the development of the area (Raco and Henderson, 2006). In the context of the brownfields regeneration, we can assume regarding the zonal model of the city that in the central parts – the most attractive parts of the cities, the reuse of brownfields will be directed towards the support of small business and housing. Such hypothesis reflects the contemporary reurbanization tendencies (Buzar et al., 2007). But beware – not always is such an intention successful, cf. the problem with dying of the city centres. The brownfields from the nearest surroundings of the city centre that were

incorporated into its hinterland during the dynamic development of the cities, have a rather variable utilization, e.g. for middle-sized business units or for building of civic amenities (Krzysztofik et al., 2012), while the vacant areas on the edge of the municipality are suitable for big industrial buildings or warehouses (Schindlerová, 2017). Provided that the preservation of the brownfields in a relatively original form is not desirable or possible (and there is not any suitable or more effective alternative), the possibility of the demolition of brownfields comes into consideration, or its demolition and decontamination of soil, alternatively its grassing and letting the unoccupied area without any concrete purpose (Johnson, Glover and Stewart, 2009 or De Sousa, 2000). Regarding the methodology, the paper is based on the literature retrieval relating to the researched problem. Regarding the objective of the paper, it is not possible to specifically define the role of the public administration or the EU institutions respectively, as the possible intervention from both of the subjects is to a certain extent fully individual and always unique with the respect to the given brownfield. Yet, general procedures of the public administration and the EU towards the problem solving of brownfields can be described (see the next chapter). In the contribution, the findings from the basic research done in 2016 based on the research questions on the perception of the citizens of Karviná of the derelict buildings in their immediate neighbourhood are mentioned. It is necessary to state that 655 respondents took part in the research questionnaire (more on the research Martinát and Turečková, 2016). The stated findings from the research will be relevant regarding the subject of the paper.

### **3. Problem Solving**

The area of brownfields and its solving falls within the competence of the government including the Parliament, specifically the Ministry of Environment and the Ministry of Regional Development. The issue also affects the Ministry of Industry and Trade, the Ministry of Environment and the Ministry of Culture, and the Ministry of Finance in regards to finances. It undoubtedly falls within the competence of other ministries and governmental agencies and institutions (CzechInvest, Centre for Regional Development, etc.). The European Union then helps to solve the problems with brownfields through its tools, especially by financing their regeneration from individual funds. The European Union unequivocally supports the investments in old buildings instead of supporting new buildings in the green field. Alongside, it recognizes the protection of the environment, preserving the contemporary urbanistic structure and interesting and valuable historical architecture. Regarding the financing of the regeneration and the redevelopment of the brownfields, the European Regional Development Fund and specific operational programmes such as Integrated Regional Operational Programme, Operational Programme Environment and Operational Programme Enterprise and Innovations for Competitiveness (more at <http://www.strukturalni-fondy.cz/>) are the most important ones. The European Union is dealing with the issue of brownfields on the local level indirectly (via financial programmes) and through individual public administration institutions.

The institutions at the level of the lower regional administration units, i.e. regions and municipalities, are closer to the problem solving of brownfields. The powers of regions are defined by a special regulation (Act no. 129/2000 Col.), according to which the region takes care of the general development of its area and the needs of its population. The region is administered by the regional authority, further bodies are the regional council, the regional council governor and the regional authority. The region is allowed to establish other bodies. Regarding brownfields, this issue can be also dealt with the boards and committees. The boards and committees can also be established by a municipality. The municipal authority is represented by the mayor, the vice mayor (vice mayors), the secretary of the municipal authority (if such a post is established) and employees of the municipality. The regional and

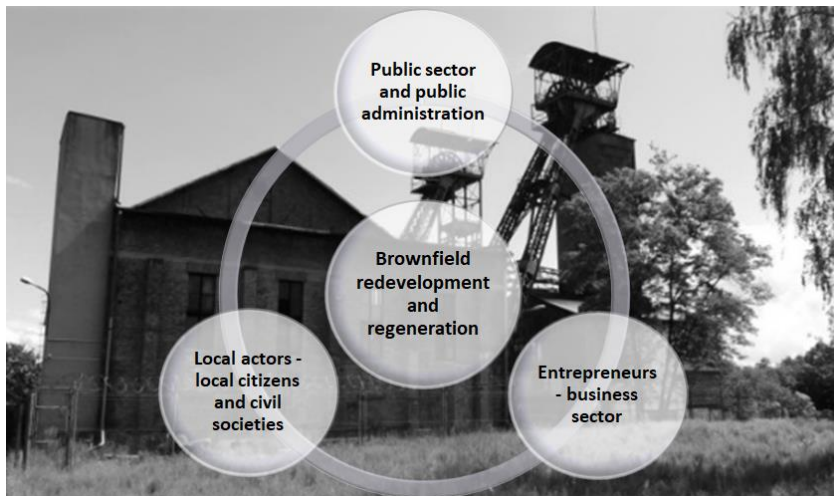
the municipal authority must be administered according to the principles of good governance of the public administration (Recommendation Rec (2007)7, 2008). The local administration regarding the brownfields plays an active role in the identification of brownfields, in reducing the effects of the brownfields, in the support of the owners and the consultancy, in the active support of the reutilization of brownfields, in the planning of the utilization of the brownfield sites and their neighbouring area , in the public promotion of projects dealing with the issue of brownfields, and in the prevention and protection against the development of new brownfields or protection against other related phenomena with negative social, competition or legal impacts (Růžicková and MacGregor Pelikánová, 2017). Table 1 clearly summarizes the individual actors involved in the sphere of brownfields.

**Table 1: Involved Actors in Problem Solving of Brownfields**

<b>involved actors on the personal level</b>	brownfields owners, consultants, off-governmental organizations, citizens and officials
<b>involved actors on the local level</b>	brownfields owners, local investors, local self-government, governmental bodies with local powers, technical, realty or legal consultants, financial institutions, the local population
<b>involved actors on the regional level</b>	brownfields owners, bodies of regional administration, regional financial institutions, regional development agencies, governmental bodies with local powers, regional investors and regional public
<b>involved actors on the national level</b>	government, parliament, affected state institutions and bodies, national regulatory bodies, national brownfields owners, national financial institutions and state investors
<b>involved actors on the global level and level of EU</b>	European Commission, European Parliament, global investors, global financial groups and international brownfields owners

Source: Ferber et al. (2006), own elaboration

**Figure 1: Stakeholders in Addressing the Issue of Brownfields**



Source: own elaboration (2018) based on Klusáček et al. (2011)

Note: The remains of the Gabriela Mine (2016), own elaboration

The above mentioned institutions of public administration involved in the problem solving of brownfields cooperate with the private sector and the citizens living in the concerned locality (see Figure 1). They always must be involved actors with a various level of direct influence and interest in solving the current unsuitable condition of the given brownfield, and persons who are indirectly involved with the regeneration and redevelopment.

**Table 2: Issues Connected With Brownfields, the Causes of the Intervention of the Public Administration**

<b>economic</b>	the loss of attractiveness for the investors and the visitors of the regions
<b>financial</b>	the decrease in the income to the public budget (fees), the ability to finance other public goods is threatened, the loss of the basis for tax calculation
<b>geographical</b>	deprivation of the neighbourhoods, unregulated urban sprawl
<b>ecological</b>	water pollution, soil contamination, buildings contamination
<b>social</b>	higher unemployment, higher criminality, the demand for social benefits

Source: Kadeřábková and Piecha (2009), own elaboration

Table 2 defines the basic issues that are connected with the brownfields and are the sources of interventions of the institutions of the public administration. A lot of effects of externalities are connected with these issues and are covered from the public budget (water pollution, increased air pollution, noise, soil contamination, concentration of poor population, or population threatened by the poverty, expansion of invasive species and the soil degradation, unregulated growth of cities and demands for the suitable technical infrastructure, etc.). The general problem of brownfields is their negative impact on the neighbouring properties, which then transforms into a further decline in the social status of the neighbouring community. As it is a local issue, the local administration is the key actor to deal with it. For Central Europe, the shortage of competences of public administration is typical of problem solving of brownfields, and even the well-informed and engaged local administration is obliged to cooperate with other (higher) levels of public administration: (1) government and legislative body must formulate and authorise inevitable proposed amendments to the relevant valid legal regulations, (2) it is necessary to prepare public programmes that solve the reuse of brownfields and reserve the financial resources for them, (3) the regions must pay attention to the sphere of brownfields when setting their priorities regarding the utilization of financial resources from the structural funds and also (4) the public administration must motivate the private owners to use effectively the abandoned localities, and the like.

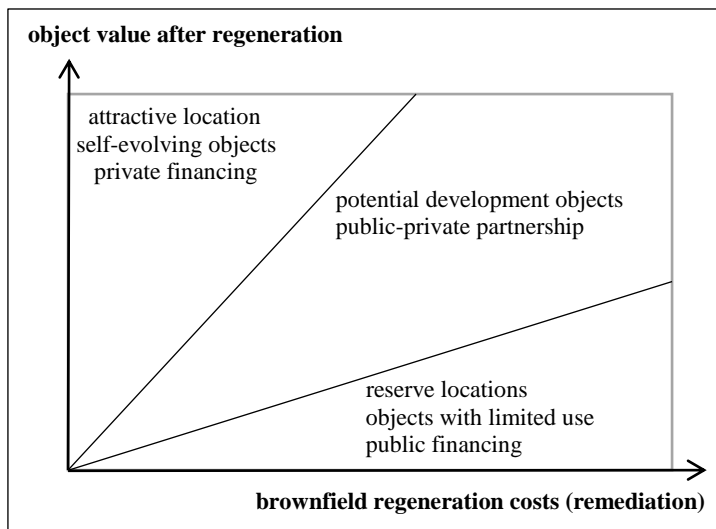
The definition of the role of the public sector may be also determined by the probability of the utilization of brownfield in the near future. The model ABC shows the level of the required intervention of the public administration in the form of public financial resources necessary for the further utilization of the brownfields offer (CABERNET, 2006), see the chart in Figure 2, where the vertical axis  $y$  represents the value of the land after the regeneration, and the horizontal axis  $x$  represents the costs for regeneration. According to this division, there are 3 groups of brownfields: (1) self-developing buildings in attractive localities, i.e. projects realized by a private sector. These are brownfields with a high developing potential that are situated in a good location and thus have a high chance that they will be looked after by the market itself. They are also typical of their reduced costs for the preparation and reconstruction when the public sector only sets the legislation frame without any need for public financial support. (2) potential buildings for the development (potential localities and areas for the development), i.e. the brownfields with a hidden developing potential, and with the local and

regional significance, yet with risks that the private sector refuses to accept. The projects on the elimination of brownfields are thus financed through the partnership of the public and private sector. It is then divided into three subgroups based on the size of the financial incentives:

- incentives of up to 20 % - it concerns the financing of the gap in the costs without which it would not be possible to implement the project. This investment is usually returned in some way, for example in the form of new job vacancies,
- incentives of 20 – 50 % - these projects are created primarily for public beneficial purposes such as e.g. protection of the environment or various social objectives,
- the last subgroup are the brownfields that are in such a bad condition that they not only damage the environment, but also the health, and they threaten the safety of the citizens. First, it is recommended that the full responsibility is taken by the guilty party, but if it fails, the public budget must cover the costs (securing the building or its demolition).

The last group (3) of this category are buildings without any developing potential with a restriction typical of its high costs for regeneration and at the same time a low value of the land after the regeneration. These brownfields are located in the areas where the supply highly exceeds the demand and no long-term commercial use is expected. The projects on solving such brownfields are fully financed from the public resources and with the sole activity of the institutions of the public sector.

**Figure 2: Types of Brownfields According to the Probability of Their Use (ABC Model Visualization)**



Source: Ferber et al. (2006), own elaboration

Regarding the focus of the contribution while following the basic research in the area of the statutory city of Karviná we can state that: the respondents generally prefer that the problem solving of brownfields is performed by the private sector and financed from the private sources (they perceive the connection with the taxes that they pay when financed from the public sources), but they insist on the intervention of the public administration with the long-term unresolved cases of brownfields in the city centre of Karviná. Such procedure is recommended rather with the vacant cultural and architecturally valuable buildings close to the centre. It is



a paradox that people demand the private solving of brownfields, yet they prefer to use them for public activities such as sports and relaxation purposes (sports ground, parks). When the city participates in the regeneration of the brownfields, the respondents want to use the buildings for housing. According to the results of the research, the institutions of the public administration should actively participate through their actions in the private solutions and intentions how to reuse the brownfield (e.g. whether it is appropriate to build a new shopping mall or a car park). The citizens expect from such an attitude that the originally vacant area gets regenerated and used and that the public interest will be maintained and the public attitude towards the individual locality will prevail over the solely private attitude. Last but not least, consultancy activities of the regional organizations of the public administration and public (state) agencies together with their direct drawing of financial sources from the EU structural funds are essential with the brownfields regeneration.

#### 4. Conclusion

The aim of this contribution was to outline some of the possibilities of the intervention of the public administration (using the EU tools) when solving the problems related to the existence of unused land, areas and buildings. Only an active local self-government and other public-law institutions will stand a chance to adequately use the limited tools and both financial and non-financial sources when regenerating and redeveloping the brownfields located in their own cadastral area. There is no doubt that the local self-government on the lowest local level is one of the key involved actor when revitalizing brownfields, and when properly motivated, it is able to find a solution or partake in the functional problem solving of brownfields in a short-term period.

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#### References

- [1] Alker, S., Joy, V., Robert P. and Smith N. (2000). The definition of brownfield. *Journal of Environmental Planning and Management*, vol. 43, iss. 1, pp. 49-69.
- [2] Brebbia, C., A. and Mander, Ü. (2006). *Brownfield sites III: prevention, assessment, rehabilitation and development of brownfield sites*. Boston: WIT.
- [3] Buzar, S., Ogden, P., Hall, R., Haase, A., Kabisch, S. and Steinführer, A. (2007). Splintering urban populations: emergent landscapes of reurbanisation in four European cities. *Urban Studies*, vol. 44, iss. 4, pp. 651-677.
- [4] Cabernet. (2006). *Role of Conceptual Models and Conceptual Thinking in Brownfield Regeneration* [online]. [cit.2018-02-25]. Available at: <http://www.cabernet.org.uk/index.asp?c=1161>.
- [5] De Sousa, C. A. (2000) Brownfield redevelopment versus greenfield development: A private sector perspective on the costs and risks associated with brownfield redevelopment in the Greater Toronto Area. *Journal of Environmental Planning and Management*, vol. 43, iss. 6, pp. 831-853.

- [6] De Sousa, C. A. (2003). Turning brownfields into green space in the City of Toronto. *Landscape and urban planning*, vol. 62, iss. 4, pp. 181-198.
- [7] Ferber, U., Nathanail, P., Bergatt-Jackson, J., Gorski, M., Krzywon, R., Drobiec, L., Petříková, D. and Finka, M. (2006). *Brownfields příručka* [online]. [cit.2018-02-24]. Available at: [http://fast10.vsb.cz/lepob/index4/handbook\\_sk\\_screen.pdf](http://fast10.vsb.cz/lepob/index4/handbook_sk_screen.pdf).
- [8] Frantál, B., Kunc, J., Nováková, E., Klusáček, P., Martinát, S. and Osman, R. (2013). Location matters exploring brownfields regeneration in a spatial context (A case study of the South Moravian Region, Czech Republic). *Moravian Geographical Reports*, vol. 21, iss. 2, pp. 5-19.
- [9] Greenberg, M., Lowrie, K., Solitare, L. and Duncan, L. (2000). Brownfields, toads, and the struggle for neighbourhood redevelopment: a case study of the State of New Jersey. *Urban Affairs Review*, vol. 35, iss. 5, pp. 717-733.
- [10] Hollander, J. B., Kirkwood, N. and Gold, J. L. (2010). *Principles of brownfield regeneration: clean-up, design, and reuse of derelict land*. Washington: Island Press.
- [11] Johnson, A.J., Glover, T. D. and Stewart, W. (2009). One person's trash in another person's treasure: The public place-making of "Mount Trashmore". *Journal of Park and Recreation Administration*, vol. 27, iss. 1, pp. 85-103.
- [12] Kadeřábková, B. and Piecha, M. (2009). *Brownfields: jak vznikají a co s nimi*. Praha: C. H. Beck.
- [13] Klusáček, P., Krejčí, T., Kunc, J., Martinát, S. and Nováková, E. (2011). The post-industrial landscape in relation to local self-government in the Czech Republic. *Moravian geographical reports*, vol. 19, iss. 4, pp. 18-28.
- [14] Kršková, M. and Pakšiová, R. (2015). Financial reporting on information about the financial position and financial performance in the financial statements of the public sector. In: *Finance and risk 2015. International scientific conference*. Bratislava: Publishing house EKONÓM, pp. 136-145.
- [15] Krysztofik, R., Runge, J. and Kantor-Pietraga, I. (2012). Paths of environmental and economic reclamation: the case of post-mining brownfields. *Polish Journal of Environmental Studies*, vol. 21, iss. 1, pp. 219-223.
- [16] Kunc, J., Navrátil, J., Tonev, P., Frantál, B., Klusáček, P., Martinát, S., Havlíček, M., and Černík, J. (2014). Perception of urban renewal: Reflexions and coherences of socio-spatial patterns (Brno, Czech Republic). *Geographia Technica*, vol 9, iss.1, pp. 66-77.
- [17] Martinát, S. and Turečková, K. (2016). Local development in the post-mining countryside? Impacts of an agricultural ad plant on rural community. *Geographia Technica*, vol. 11, iss. 1, pp. 54-66.
- [18] Ministerstvo průmyslu a obchodu. (2008). *Národní strategie regenerace brownfieldů* [online]. [cit.2017-09-22]. Available at: <http://czechinvest.org/data/files/strategie-regenerace-vlada-1079.pdf>.
- [19] Ministerstvo vnitra. (2008). *Recommendation Rec (2007)7* [online]. [cit.2018-02-22]. Available at: <http://www.mvcr.cz/clanek/dobra-sprava-v-dokumentech-rady-evropy.aspx>.
- [20] Park, R. E. and Burgess, E. W. (1925). *The City*. Chicago: University of Chicago.

- [21]Raco, M. and Henderson, S. (2006). Sustainable urban planning and the brownfield development process in the United Kingdom: Lessons from the Thames Gateway. *Local Environment*, vol. 11, iss. 5, pp. 499-513.
- [22]Růžičková, E. D. and MacGregor Pelikánová, R. (2014). Recent trends in the regime of transfer tax in the Czech Republic and selected EU member states. *Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and Administration*, vol. 21, iss. 31, pp. 25-33.
- [23]Rydvalová, P. and Žižka, M. (2006). Ekonomické souvislosti revitalizace brownfields. *Politická ekonomie*, vol. 5, pp. 632 – 644.
- [24]Schindlerová, V. and Šajdlerová, I. (2017). Influence tool wear in material flow. *Advances in science and technology-research journal*, vol. 11, iss. 1, pp. 161-165.
- [25]Sun, W. and Jones, B. (2013). Using multi-scale spatial and statistical analysis to assess the effects of brownfield redevelopment on surrounding residential property values in milwaukee country, USA. *Moravian Geographical Reports*, vol. 21, iss. 2, pp. 56-64.
- [26]Thornton, G., Franz, M., Edwards, D., Pahlen, G. and Nathanail, P. (2007). The challenge of sustainability: incentives for brownfield regeneration in Europe. *Environmental science and policy*, vol. 10, iss. 2, pp. 116-134.
- [27]Turečková, K., Martinát, S., Nevima, J., Škrabal, J. and Chmielová, P. (2017b). Impact of brownfields on the real estate prices: A case study from three locations in the Moravian Silesian Region (Czech Republic). In: *Vision 2020: Sustainable Economic development, Innovation Management, and Global Growth*. Madrid: IBIMA, pp. 2560-2568.
- [28]Turečková, K., Martinát, S., Škrabal, J., Chmielová, P. and Nevima, J. (2017a). How local population perceive impact of brownfields on the residential property values: some remarks from post-industrial areas in the Czech Republic. *Geographia Technica*, vol. 12, iss. 2, pp. 150-164.
- [29]Williams, K. and Dair, C. (2007). A Framework for assessing the sustainability of brownfield developments. *Journal of Environmental Planning and Management*, vol. 50, iss. 1, pp. 23-40.

## **A Quantitative Research about the Effect of Euroscepticism on the European Integration**

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### ***Abstract***

*Discussions on the process of European integration have been on the agenda since the day the European Union was established. The discussions of the Union whose first aim was to create an economic integration began to be seen at political and cultural levels as well. One of the issues affecting integration is considered 'Euroscepticism'. Many types of researches have been done within the scope of the Euroscepticism. It is also known that various researches have been carried out in countries on the determination of the Euroscepticism level of a society. However, it is seen that these studies generally remain at the descriptive level and there is no clarity about the fact that which factors are taken into consideration. The aim of this study is to show that the impact of Euroscepticism on European integration can also be measured by quantitative research methods and that the research factors can be extended to be done in all countries. Thus, a statistical analysis was carried out with the answers gathered from the International Relations Department students at Kocaeli University by survey method. It was aimed to generalize the questions of this study for all the countries which are probably as a subject of Euroscepticism.*

**Keywords:** *European integration, euroscepticism, euroscepticism factors*

**JEL Classification:** *F50, F53, N40, N44*

### **1. Introduction**

The European integration has been affected by many factors. Nowadays maybe the most prominent of them is the 'Euroscepticism' (Chuguryan, and Kucharčík, 2014, p. 280). The 'Euroscepticism', which has become increasingly important in the process of leaving the United Kingdom membership of the Union called Brexit, has become one of the most important factors affecting integration (Dorey, 2017, p. 27). The Euroscepticism, which has firstly began to be used in the UK since the 1980s, has intensified in the 1990s. There are some typologies of Euroscepticism which are used by experts. However, these studies generally seem to remain at a descriptive level. In order to fill this gap in the literature and to measure the level of the Euroscepticism in the countries, questions have been prepared and the answers to these questions have been aimed to determine the factors for the Euroscepticism in the countries. When studies on this area are examined, it is seen that there is not a study in which the effect of Euroscepticism on the European integration is investigated by quantitative research methods and the factors are determined in the framework of the debates about the future of the European Union (EU). With this regard, questions were asked about the measurement of the Euroscepticism and it was planned especially to ask the students of the International Relations Department of Kocaeli University by the survey method. It is thought

that the answers given by international relations students who have knowledge about the European Union will help to establish the factors that will arise in the effect of Euroscepticism on the European integration. Thus, the aim of the study is to show that the Euroscepticism can be measured by quantitative research methods and that the emerging factors can be broadened to include researches in all countries.

### **1.1 Literature Review**

When the international literature on Euroscepticism is examined, it is understood that the Euroscepticism has been a research subject since the 1980s (Matúš, 2016, p. 615). The term was first used in the 'The Times', published on November 11, 1985, during Margaret Thatcher's commentary on the European Economic Community. Studies after this date have attempted to explain how Euroscepticism is addressed in the literature and have assessed how it is on the agenda both theoretically and practically.

Before analyzing the literature, the term should be defined. One of the most accepted definitions of the Euroscepticism was suggested by Paul Taggart (1998, p. 365), according to him Euroscepticism is "the opposition and doubt to the process of European integration".

Euroscepticism can be understood as a discursive formation of arguments, which performed by political actors in rejecting the EU policies (Polk and Rovny 2017, p. 356). The nature of Euroscepticism is reactive. It means that Eurosceptic arguments are related not only to the European integration process itself but also to the justificatory discourse employed by political actors to legitimize this process. Eurosceptic people generally criticize the European Union for taking power away from the national government of member states and posing a threat to the sovereignty of the nations (Elsas, Hakhverdian, and Brug, 2016, p. 1182).

In the international literature, Euroscepticism was firstly used in a study which published by Paul Taggart. After that, Taggart again worked on the same subject in 1997 and 1998. The separation between soft and hard Euroscepticism has been made by Paul Taggart and Aleks Szczerbiak in 2002 (Taggart and Szczerbiak, 2002, p. 2-3). And most of the studies are generally based on the political parties' view of Europe (Veebel, 2017, p. 89).

Later, the typology which was suggested by Kopecky and Mudde has emerged. In addition to Taggart and Szczerbiak typology, they included the supporters of the European Union in the study of Euroscepticism (Kopecky and Mudde, 2002, p. 300). After that, it is seen that the works of Flood and Usherwood (2005, p. 6) has created a six type of factors that have affected the Euroscepticism. These factors are Maximalist, Reformist, Gradualist, Minimalist, Revisionist, and Rejectionist. In 2007, WeBels (2007, p. 288) has created a typology which has investigated the relation between European identity and Euroscepticism. In 2008, Sorensen (2008, p. 8) published an article which has showed 6 types of factors typology. According to her, these factors are national sovereignty, ideology, political performance, economic utility, effective pull, and principled opposition. And finally, Leconte (2010, p. 48) has made a typology which is based on a theoretical review of the Euroscepticism. The main point of all these studies is that all of them are generally analyzed the political parties' view to the EU and made some analysis within the context of the political environments of countries (Riedel, 2016, p. 808).

As it is seen in the literature review, there are studies to determine the dimensions of the Euroscepticism, but none of them seem to benefit from a statistical analysis. It is envisaged that this gap in the national and international literature will be filled in and it will be an example of future work on Euroscepticism. Therefore, it is thought that the most important original

value of this study is to present a model proposal which can be applied in every country by suggesting a new scientific analysis in the field of Euroscepticism.

The Euroscepticism is one of the most important threats to the European integration process. While the enlargement of the EU has occurred, the integration capacity has begun to be discussed by all of the member states and the EU citizens (Schimmelfennig 2008, p. 919). Developing a coherent policy can be more difficult with 28 members than with 15 members. And it is possible that the membership of the new European countries can bring new policy perspectives to the EU because of their different cultures, geographic locations and historical experiences (Sjursen 2002, p. 499). These new perspectives can be criticized by the EU citizens and also by some political parties. Thus the relation between the level of Euroscepticism and the European integration is more and more important during the time of economic, political and social crisis which the EU has faced.

## **2. Problem Formulation**

Within the scope of the study, firstly the terms of Euroscepticism and European integration and the relation between these terms have been given briefly. The survey questions have been selected in the light of current developments and the literature review. The survey has been applied to Kocaeli University International Relations Department student. It was decided that the scope of the responders should be limited to the International Relations students because these students are more interested in the EU policies and more relevant to current international issues than the students of other departments. Also, compared to other faculties and departments in the University, International Relations has been influenced by the inclusion of higher levels of involvement in European-related fields of study in future plans of students.

The survey method which is the closest to the social sciences was selected as the quantitative research methods. The questions in this survey have been tried to be kept at the general level in order to ensure the applicability in all countries. There are five determined dimensions which are aimed to measure the level of Euroscepticism and the results of the survey will be determined whether it is successful to find the determined dimensions or not. After determining the factors, the effects of these factors on the European Integration will be analyzed. At this process, the Likert scale was used: (1) Absolutely Participating, (2) Participating, (3) Undecided, (4) Not Participating, (5) Absolutely Not Participating. Moreover some closed-ended questions about the European perception of respondents were added, so it is aimed to understand the interaction between the dimensions of the Euroscepticism and the European integration. Finally, with socio-demographic variables, questions were also asked regarding gender, age, marital status, education, place of residence, and income status of the family.

### **2.1 Model and Data**

This study tries to prove that Euroscepticism can be separated into the factors and the survey method can be used in determining these factors. Surveys can determine the general tendency in a group of people, but when statistical analyzes are used, it is known that the results can be applied and improved on other groups as well. Thus this study was carried out in order to understand whether the result of the questions prepared in the light of literature analysis will help to evaluate the factors of Euroscepticism or not. It has been shown that the factors for explaining the Euroscepticism in the literature can also be demonstrated by statistical analysis.

Questionnaires were asked to undergraduate students of Kocaeli University International Relations Department. The responses to the questionnaire were collected and data were entered into the SPSS program. As a result of the survey application, 412 students were reached. Five important factors were determined by literature review and it was tested whether these factors could come out with the survey study. These factors can be listed as economic, political, cultural, social and democratic.

In the light of the demographic questions directed to the respondents; 50.2% of the participants are female and 49.8% are male. Participants' ages range from 18 to 25, with a maximum age of 21. 98% of participants are single. The class distribution in universities is equal. Thirty-five percent of the respondents reside with their family, while 27% of them reside in a government dorm. Finally, it appears that the income status of the family of 65% of the participants is below 5000 Turkish liras per month.

The answers were subjected to reliability analysis before the survey results were analyzed. According to the Cronbach's Alpha reliability analysis in the SPSS program, the survey was found to be reliable at a rate of 0.771.

In order to understand the level of Euroscepticism, 32 questions were asked of the respondents. These questions were subjected to factor analysis and the single-question factors were removed during the analysis. As a result, it is seen that the 5 important factors that are thought to occur in the context of the literature review are also the result of statistical analysis. Factor analysis results, questions that are evaluated in the formation of factors and components in the factor analysis can be seen in the following tables.

**Table 1: Economic Factors that Affect the Euroscepticism**

<b>Economic Factors</b>	<b>Component</b>
The standart of life will increase.	.687
Economic growth will increase.	.749
Job opportunities will increase	.743
National currency can be ended.	-.502
There will be free movement of goods within Europe.	.685
Standart of living will be worsen.	-.455
Economy will be worsen.	-.674

**Table 2: Cultural Factors that Affect the Euroscepticism**

<b>Cultural Factors</b>	<b>Component</b>
There will be cultural degradation.	.660
Moral characteristics of nation will be negatively affected.	.485
There will be more respect for other religions.	.323
It will be easier to learn foreign languages.	.500
The official language structure will be distorted.	.557
Historical values will be lost.	.697
National identity will be assimilated.	.774

**Table 3: Political Factors that Affect the Euroscepticism**

<b>Political Factors</b>	<b>Component</b>
Nationalism will rise.	.652
There will be more interferation to domestic politics.	.393
It contributes to the improvement of public order.	.543
There will be a political trust environment.	-.232

**Table 4: Democratic Factors that Affect the Euroscepticism**

<b>Democratic Factors</b>	<b>Component</b>
Respect for human rights will be more important	-.398
There will be more gender equality.	-.342

**Table 5: Social Factors that Affect the Euroscepticism**

<b>Social Factors</b>	<b>Component</b>
There will be more social rights.	.092
There will be more educational opportunities.	-.186
Working conditions will be improved.	.070

As it can be seen in the tables, the level of Euroscepticism can be analyzed in terms of economic, cultural, political, democratic and social factors. These factors which are considered as dimensions of Euroscepticism in the literature can also be found in the result of statistical analysis. This will allow the study to be applied to all groups, parties, and countries in order to create a model for understanding the level of Euroscepticism.

Once the factors are identified, it is necessary to determine the extent to which these factors have influenced European integration. For this reason, the mutual analysis of the questions about general European integration, which is asked after the questions about Euroscepticism, is important. It will be possible to test hypotheses with the aid of the ANOVA test and to understand the effects of the factors of Euroscepticism on the European integration.

The hypotheses can be varied, but within the scope of this study, it is aimed to reveal the extent to which the general view of the EU is affected by these factors. For this reason, the hypotheses are as follows:

H<sub>0</sub>: Participants' perceptions of (economic, cultural, political, democratic and social) issues do not differ significantly from their views on the EU.

H<sub>1</sub>: Participants' perceptions of (economic, cultural, political, democratic and social) issues do differ significantly from their views on the EU.

These hypotheses were subjected to the ANOVA test separately for each factor. If sig. value is above 0.05, it is known that the H<sub>0</sub> hypothesis is accepted and if sig. value is below 0.05, the H<sub>0</sub> hypothesis is rejected. According to this fact, the analyses have been made. H<sub>0</sub> hypothesis is rejected in the context of economic factor and it can be stated that there is a significant difference between the groups. Therefore, participants who are negative to the EU are found to have higher perceptions of economic issues. In the context of the cultural factor, the H<sub>0</sub> hypothesis is accepted, and there is no significant difference between the groups. In the context



of the political factor, the  $H_0$  hypothesis is rejected and it is evaluated that there is a significant difference between the groups. Regarding which answer is meaningfully differentiated, it is understood that the participants who are negative towards the EU have higher perceptions of political issues. In the context of the democratic factor, the  $H_0$  hypothesis is rejected and it can be interpreted that the participants with a negative opinion about the EU have higher democratic perceptions. Finally, it is seen that the social hypothesis is rejected in the context of the social factor, and it can be stated that the participants who are negative towards the EU have higher perceptions of social issues.

### 3. Conclusion

The aim of this study is to solve the problems faced in the European integration process by analyzing all of the questions that are discussed in all studies together, so that the dimensions of the Euroscepticism are revealed. This study aims to show the effect of Euroscepticism on the European integration, by using statistical methods. Hence, it will be possible to create a statistical prototype for studies which will be done after that. Showing the applicability of this prototype is the most important purpose of this study. This is because the Euroscepticism should not be considered in the sense of opposing the whole of European integration. The Euroscepticism stems from the fact that countries, groups, political parties, or even, if delimited individuals are willing to stay away from integrating because they can lose their superiority in areas where they think they are advantageous. In this respect, it is thought that the presence of the dimensions of Euroscepticism by assessing the Euroscepticism within the framework of certain questions and subjecting the questions to factor analysis is considered to be very useful for understanding the effect of Euroscepticism on European integration. The most important outputs to be achieved as a result of this study are; to analyze the Euroscepticism in all countries statistically with the created dimensions of the Euroscepticism and to see the obstacles in front of an effective European integration more clearly.

When we analyze the results of this study, it tried to understand whether the International Relations students of Kocaeli University are Eurosceptic about the membership of the EU or not. As a result, it can be seen that the students find the cultural issues useful for Turkey's EU membership, but they are Eurosceptic on economic, political, social and democratic issues. At these points, there can be more delicate balances between Turkey and the EU, so if an effective European integration is aimed at, it is necessary to carry out the regulatory works for these four (economic, political, social and democratic) factors.

### References

- [1] Chuguryan, S. and Kucharčík, R. (2014). Greenland towards Independence and its Eventual EU Membership, *Proceedings of the International Conference on European Integration 2014*. Ostrava: VŠB – Technical University of Ostrava, 2014, pp. 280-287.
- [2] Dorey, P. (2017). Towards Exit from the EU: The Conservative Party's Increasing Euroscepticism since the 1980s, *Politics and Governance*, vol. 5, iss. 2, pp. 27-40.
- [3] Flood C. G. and Usherwood S. (2005). Positions, Dispositions, Transitions: A model of Group Alignment on EU Integration, In *55th Annual Conference of the Political Studies Association*. University of Leeds, p. 1-18.

- [4] Kopecky P. and Mudde C. (2002). The Two Sides of Euroscepticism Party Positions on European Integration in East Central Europe, *European Union Politics*, vol. 3, iss. 3, pp. 287-326.
- [5] Leconte C. (2010). *Understanding Euroscepticism*, New York: Palgrave Macmillan.
- [6] Matúš M. (2016). The Reasons of Possible “Brexit” From the European Union, Proceedings of the International Conference on European Integration 2016. Ostrava: VŠB – Technical University of Ostrava, 2016, pp. 615-622.
- [7] Polk J. and Rovny J. (2017). Anti-Elite/Establishment Rhetoric and Party Positioning on European Integration, *Chinese Political Science Review*, vol. 2, iss. 3, pp. 356-371.
- [8] Riedel, R. (2016). Euroscepticism of Euroenthusiasts, Proceedings of the International Conference on European Integration 2016. Ostrava: VŠB – Technical University of Ostrava, 2016, pp. 808-812.
- [9] Schimmelfennig F. (2008). EU Political Accession Conditionality after the 2004 Enlargement: Consistency and Effectiveness, *Journal of European Public Policy*, vol. 15, iss. 6, pp. 918-937.
- [10] Sijursen H. (2002). Why Expand? The Question of Legitimacy and Justification in the EU’s Enlargement Policy, *JCMS*, vol. 40, No. 3, pp. 491-513.
- [11] Sorensen C. (2008). Love me Love me not A Typology of Public Euroscepticism, *SEI Working Paper No:101 / EPERN Working Paper No:19*, Brighton, Sussex European Institute.
- [12] Taggart, P. (1998). A Touchstone of Dissent: Euroscepticism in Contemporary Western European Party Systems, *European Journal of Political Research*, Vol. 33, iss. 3, pp. 363-388.
- [13] Taggart P. and Szczerbiak A. (2002). The Party Politics of Euroscepticism in EU Member and Candidate States, *SEI Working Paper No.51 / Opposing Europe Research Network Working Paper No.6*, Brighton, Sussex European Institute.
- [14] Van Elsas, E. J.; Hakhverdian, A. and Van der Brug, W. (2016). United against a Common Foe? The Nature and Origins of Euroscepticism among Left-Wing and Right-Wing Citizens, *West European Politics*, vol. 39, iss. 6, pp. 1181-1204.
- [15] Veebel V. (2017). Opposing the European Union or Looking for More Reforms: Different Facets of Euroscepticism in Estonia, *Romanian Journal of European Affairs*, vol. 17, iss. 2, pp. 89-107.
- [16] WeBels, B. (2007). Discontent and European Identity: Three Types of Euroscepticism, *Acta Politica*, vol. 42, iss. 2-3, pp. 287-306.

## Research and Development and its Spatial Implications in the Context of the Europe 2020 Strategy

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### **Abstract**

*Research and development and innovation are key policy components of the Europe 2020 strategy. These elements should play a key role in securing the competitiveness of the whole EU in the future while maintaining internal territorial cohesion. By contrast the above mentioned activities naturally tend to the spatial clustering. In this paper the authors elaborate on the situation of the Czech Republic and its regions in relation to the Europe 2020 strategy target on Research and Development. The objective of the paper is to analyse selected research and development aspects from the quantitative and qualitative perspectives. The quantitative part reflects flows of the inputs related to the R&D activities. The qualitative part is extracted from a survey conducted by the Technology Agency of the Czech Republic in 2014. Survey is focused on the cooperation among relevant actors of the R&D collaboration. The outcomes show that the greatest barriers of cooperation among relevant actors are represented by bureaucratic burdens.*

**Keywords:** Europe 2020 strategy, knowledge flows, regional development, Research and development, spillovers

**JEL Classification:** I23, O39, R00, R11

### **1. Introduction**

A smart economic growth based on knowledge and innovation, while fostering social and territorial cohesion, represent two interlinked areas listed among the key priorities of the Europe 2020 Strategy. The Strategy execution is supported by seven flagship initiatives launched by the European Commission in order to support the progress towards all the Strategy goals. The “Innovation union” flagship initiative aims to improve the conditions for research and innovation. The main weaknesses to tackle within this initiative are the underinvestment into Research and Development (compared to USA or Japan) and unsatisfactory framework conditions for the Research and Development (R&D) itself, as well as for turning the R&D outcomes into the value for the private sector. The cooperation between the scientific and business world shall be improved and the barriers for bringing innovations to the market shall be removed. In parallel to the Innovation union flagship initiative, also a Regional Policy was launched, in order to “promote innovation in all regions, while ensuring complementarity between EU, national and regional support for innovation, R&D, entrepreneurship and ICT” (European Commission, 2010c, p. 2). A significant diversity is perceived in the R&D and innovation performance across the EU regions. It is equally important to support excellence of the advanced regions, as to mobilise the full innovation potential of the lagging ones, in order to unlock the growth potential of the European Union as a whole (European Commission, 2010a, 2010b, 2010c).

Research and development activities, innovation, knowledge creation and learning can be regarded as critical when it comes to ensuring a competitive edge of firms, as well as regions and entire states. The spatial aspects play an important role in here, not only in the area of innovation and knowledge creation, but also in their diffusion (Jaffe, Trajtenberg, Henderson 1993; Audretsh and Feldman, 1996). Obviously the geographical proximity itself is not the only pre-requisite. Next to the geographical one there are other forms of proximity playing a key role here, such as cognitive, organisational, social or institutional one. All these proximity forms are mutually complementing each other, but can be also substituting each other (Malecki, 1980; Malmberg and Maskell, 2002; Storper and Venables, 2004; Boschma, 2005). Boschma (2005, p.62) states that: “What unites the different dimensions of proximity is that they reduce uncertainty and solve the problem of coordination, and, thus, facilitate interactive learning and innovation”.

An important phenomenon to take into consideration when looking at regional diversity and uneven regional development are the externalities of regional economies, i.e. the fact that they interact with each other. The externalities are not only including knowledge spillovers, but also the effects of specialized labour and output market and the related accumulation of production factors (Lopez-Bazo, et al., 2004; Paci and Marrocu, 2013; Klimova and Zitek, 2016). The basis for the convergence are the industrial clusters, enabled by the knowledge spillovers and the inter-firm demand-supply networks (Parent and LeSage, 2012; Harris, 2011). Hence the “innovation is increasingly understood as an open system where different actors collaborate and interact” (European Commission, 2010c, p. 2). The level of collaboration and interaction influences essentially the impact of the research and development externalities (Fu, 2015).

In the context of the above mentioned, the authors of this paper focus on one hand on a spatial inequality, or more precisely a geographical concentration of R&D activities, and on the other hand on qualitative aspects of the cooperation between the private and public sector.

## 2. Problem Formulation, Data and Methodology

The objective of the paper is to analyse selected R&D aspects in the Czech Republic from the quantitative and qualitative perspectives. The quantitative part reflects flows of inputs related to the R&D activities. The qualitative part is extracted from a survey conducted by the Technology Agency of the Czech Republic (TACR) in 2014. Survey is focused on the cooperation among relevant actors of the R&D collaboration.

For the quantitative analysis the data available from the Czech Statistical Office are utilized. The row data are in a form of time series of R&D workplaces, employees and expenditures on NUTS III level. Each of the variables is further split into sectors: entrepreneurial, governmental, universities. The years included in the elaboration are 2005-2015. The input flows related to R&D are investigated from the spatial perspective based on the calculated Theil index. Its values are compared on bi-annual bases. The Theil index shall have values from the interval  $0 \leq T \leq \ln k$ , where the maximum value is reached, if the monitored indicator is concentrated into one spatial entity only. Due to uneven sizes of the NUTS III regions, the weighted version of the Theil index is applied according to the formula:

$$T_v = \sum_{i=1}^k \frac{n_i}{n} \frac{y_i}{y} \ln \frac{y_i}{y} . \quad (1)$$

The weighting parameter is the mid-period population, since the population is perceived as the primary agent of the economic activities. The population size reflects approximately the size and the socio-economic potential of a territory. In the formula (1)  $k$  stands for the number of

regions,  $y_i$  for individual values of the variable in question and  $y$  for the mean of this variable. The number of regions used in this case is 13, since out of the 14 NUTS III regions, Praha and the Central Bohemian Region are aggregated into one due to their natural geographical characteristics. (Theil, 1965; Novotny, Nosek and Jelinek, 2014; Suchacek et al., 2017).

The data for the qualitative assessment consist of TACR clients opinions collected within two questions of the survey realized in 2014: the respondents were asked to choose motives that lead to their cooperation with the research institutions and also to select the most important barriers observed within such cooperation. The sample includes answers from 447 respondents, out of 5150 emails sent out (9% response rate of the questionnaire). The questions concerning motives and barriers are constructed as multi-selection questions; a set of motives and barriers is presented to the respondents to choose as many as applicable.

The qualitative analysis purpose is to group the motives/barriers items based on their relevance similarity. Given the qualitative data type, the analysis is utilizing the concept of the “grouping based on the confidence intervals” (Friedrich et al., 2018, p. 90-93), in this particular case the interval estimates of the population proportion. They are constructed around the point estimate of the population proportion (i.e. the sample proportion) according to the formula (2) (Hendl, 2006), where  $p$  represents the sample proportion,  $n$  the sample size and  $z$  the z-score for the particular significance level:

$$p \pm z_{1-\alpha/2} \sqrt{\frac{p(1-p)}{n}} . \quad (2)$$

In the second part of the qualitative analysis all items are sorted in the decreasing order based on the sample proportion. And finally the overlaps of population proportion confidence intervals are evaluated, in order to identify groups of motives and barriers that are significantly different from the rest of the items.

### 3. Problem Solution

The outcomes of the quantitative and qualitative analysis are described in the following subchapters.

#### 3.1 Quantitative Analysis

The development of the geographical distribution of the R&D inputs flows in the Czech Republic is captured in the Table 1. The attention is paid to the distribution of the R&D workplaces, employees (in full time equivalents) and total R&D expenditures. Also the differences between the private sphere, represented by the entrepreneurial sector, and the public sphere, represented by the governmental sector, and universities are followed.

Generally it can be stated that the geographical inequalities are decreasing in time. This trend is obvious in all tracked areas and in all sectors. However when comparing the figures of the first and last years, it can be concluded that the de-concentration trend is very modest; the differences between Theil index values are not bigger than 0.1. The only exception can be observed in the R&D expenditures in the university sector, where the Theil index value decreased between the first and last year by 0.111.

The least geographically concentrated category is the number of R&D workplaces. This statement is valid for all tracked sectors and during the whole tracked time period. Also it is

evident that the governmental R&D workplaces are much more concentrated in comparison to university workplaces and private workplaces.

The geographical distribution of R&D employees is characterized by a higher concentration than the workplaces in all sectors and during the whole time period. The comparison of employee concentration between sectors results in a similar pattern as with the workplaces.

The R&D expenditures are among the tracked basic R&D inputs the most geographically concentrated. This can be observed during the full time period and across sectors. The only exception are university R&D expenditures in years 2011 and 2013, where the concentration is lower than the concentration of university employees.

**Table 1: Theil Index for R&D Workplaces, Employees and Expenditures per Sector/Time**

	2005	2007	2009	2011	2013	2015
Workplaces						
<b>Entrepreneurial</b>	0.380	0.379	0.369	0.338	0.344	0.318
<b>Governmental</b>	0.789	0.740	0.718	0.713	0.723	0.722
<b>Universities</b>	0.425	0.456	0.450	0.421	0.437	0.397
Employees						
<b>Entrepreneurial</b>	0.527	0.544	0.478	0.465	0.470	0.450
<b>Governmental</b>	1.158	1.146	1.129	1.115	1.093	1.088
<b>Universities</b>	0.555	0.611	0.599	0.555	0.556	0.522
Expenditures						
<b>Entrepreneurial</b>	0.573	0.650	0.525	0.472	0.546	0.519
<b>Governmental</b>	1.187	1.212	1.162	1.153	1.114	1.180
<b>Universities</b>	0.669	0.626	0.641	0.526	0.492	0.558

Source: authors' calculation

Despite the fact that the geographical concentration of basic R&D inputs is decreasing in time, a significant dominance of certain regions in the Czech Republic can be noted. In all studied aspects and during the whole tracked time especially two regions were standing out: the Central Region, including Prague, the Capital City, together with the Central Bohemian Region; and the South Moravian Region. A selection of the absolute and relative numbers of the year 2005 (and in brackets also 2015) is presented in the following paragraphs.

When it comes to the R&D workplaces in the Czech Republic there were in total 1 956 (2 811) workplaces; out of which 1 588 (2 387) in the private sector, 209 (196) in the governmental sector and 159 (228) at the universities. In the Central Region were located 34% (29%) of private R&D workplaces; 57% (55%) of governmental ones and 35% (33%) of the university workplaces. In the South Moravian Region, there were placed 15% (17%) of all private R&D workplaces, 15% (14%) of the governmental and 16% (18%) of the university ones.

Concerning the R&D staff, there were altogether 43 141 (66 186) R&D employees in the Czech Republic, out of which 21 116 (36 365) in the private sector, 11 054 (12 953) in the governmental sector and 10 972 (16 868) at the universities. In Prague and its surroundings there were employed 42% (36%) of all private sector R&D employees, 81% (79%) of employees in the governmental sector and 41% (37%) of university employees. In the South Moravian Region there were employed 12% (20%) of the private sector R&D employees, 12% (13%) of the governmental sector and 20% (24%) of the university employees.

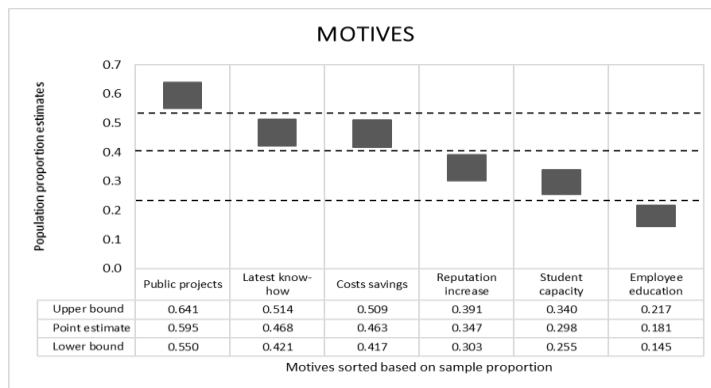
The total R&D expenditures (figures in millions CZK) on the country level were 37 952 (88 321), out of which 22 186 (48 148) were spent in the private sector, 8 686 (18 091) in the governmental one and 7 080 (22 083) at the universities. The R&D expenditures in the Central Region represented 45% (41%) of the private sector sources, 82% (86%) of the governmental expenditures and 47% (35%) of all university R&D expenditures. The shares of the South Moravian Region were 10% (18%) of the private sector R&D expenditures, 11% (9%) of the governmental ones and 21% (32%) of the university R&D expenditures.

Based on the presented figures the given regions can be marked as R&D centres of the Czech Republic. In some of the aspects their dominant position is even being strengthened. However, it can be stated, that in most of the tracked aspects the position of the Central Region is being diluted. Contrariwise the position of the South Moravian Region in the R&D area is reinforced. Generally we can conclude that despite the significant increase of the R&D expenditures and employee numbers, as well as R&D infrastructure strengthening efforts, the spatial distribution of the R&D activities in the Czech Republic stays relatively strongly concentrated.

### 3.2 Qualitative Analysis

The qualitative part of this paper is focused on one of the key areas within R&D and that is collaboration among the main parties. Firstly all motives (and equally also barriers) were sorted based on their sample proportion in a descending order, i.e. the items raised by the most respondents are considered as the most important. Then for each item among the motives (and also barriers) the 95% confidence intervals for population proportions were calculated and based on them all motives (and barriers) consequently grouped. The grouping is built on the fact that items with overlapping confidence intervals are not statistically distinguishable on the given significance level, hence the groups borders are between intervals, where the lower bound of an interval is higher than the upper bound of the following one.

**Figure 1: Motives - Confidence Intervals for Population Proportion and Grouping**



Source: authors' elaboration

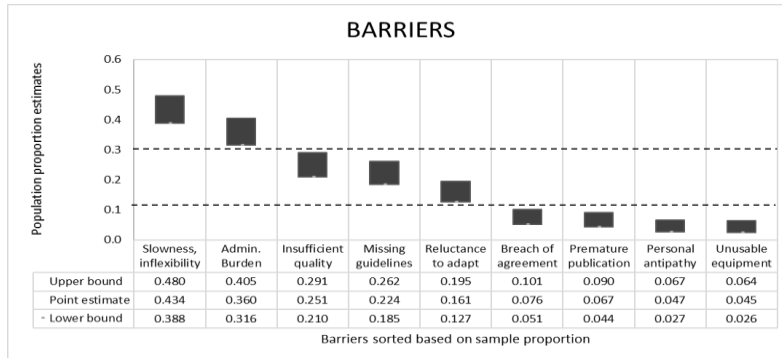
The outcome of the motives analysis is captured in Figure 1, displaying the relevance of the private sector motives standing behind their R&D cooperation with the universities and research institutions. As shown in Figure 1 the six original motives are, based on the population proportion interval estimates, merged into four categories:

- a. Public projects – the most important aspect, highlighted by almost 60% of respondents as the motive leading to the cooperation with research institutions was “gaining a competitive advantage through projects funded from public sources (research)”.

- b. Latest know-how, Cost savings – the second category of motives includes “easier access to the latest know-how/technologies”, but also “saving costs for research”, hence both of the items are pointing the benefits of the external R&D collaboration in comparison with company internal R&D.
- c. Reputation increase, Student capacity – the third group includes items “enhancing the reputation of the company” and “utilization of student capacity especially with regard to access to a qualified labour force”.
- d. Employee education – the least important motive is “activation of further education of employees”. The benefit of increasing the competence level of employees is perceived as minor compared to the rest of the motives presented.

Generally it can be concluded that primary motives encouraging the private sector to the cooperation with R&D organizations are related to the competitive edge gaining and market position strengthening. The competitive edge shall be gained in particular via external financial sources, internal costs reduction and latest know-how and technologies access and adaption. It is somewhat surprising that the motive of employee education is left behind, especially in the context with the fact that in the R&D field the tacit knowledge plays a key role.

**Figure 2: Barriers - Confidence Intervals for Population Proportion and Grouping**



Source: authors’ elaboration

The barriers elaboration, visualized in Figure 2, is built on the barriers relevancy as stated by private sector respondents, based on their experience within the cooperation with the R&D institutions. The evaluation of the population proportion interval estimates, calculated for each of the nine original barriers, lead to the grouping into three categories:

- a. Slowness and Inflexibility, Administrative burden – according to the respondent’s opinion the most important barriers, hindering the cooperation, are “slowness and inflexibility of the university system” and “high administrative burden on the company”.
- b. Insufficient quality, Missing guidelines, Reluctance to adapt – in the second category is included the barrier of “insufficient quality of research / services of the university/ RO; together with the “absence of clearly defined methodologies and guidelines for research collaboration”, as well as the “reluctance of university / RO to modify the research carried out based on relevant information”.
- c. Breach of agreement, Premature publication, Personal antipathy, Unusable equipment – among the least frequently perceived barriers are the last four items: the “failure of university / RO to comply with agreements in research collaboration”, the “premature publication of the results of joint research by university / RO”, the “personal antipathy” and the “unusable instrumentation of the university / RO”.



Obviously the most important barriers, limiting the cooperation from the private sector point of view, are of the institutional character. In the first place it is the administrative heaviness of the entire process and inflexibility within the system. Another limiting aspect is the absence of clearly defined working practices. Also the quality of R&D services is not satisfactory. On the other side the technical infrastructure challenges and personal conflicts are perceived as the least occurring.

#### 4. Conclusion

In the analysed time period, starting in year 2005, the R&D activities in the Czech Republic are clearly growing. The development of the R&D infrastructure is accompanied by the capacity increase of the human resources involved in the R&D area. In parallel also the R&D expenditures are raised. This trend is valid for the private, as well as the public sphere, but does not lead to a major decrease in spatial inequalities in the Czech Republic. Although the geographical concentration of R&D basic inputs flows is slightly lowered, two main R&D locations in the Czech Republic are identified. Prague together with its surroundings and the South Moravian region are dominating in the long term in all tracked areas and sectors. While the position of the Central Region is relatively diminishing, the dynamic progress of the South Moravian region is very evident.

The qualitative part of the paper was focused on the key area of the cooperation between the businesses and research organizations. The motives leading to the cooperation from the private sector point of view were analysed. The most important motive identified is the competitive advantage coming through the public sources projects. Also the possibility to access and adapt the latest know-how and the reduction of own R&D costs are perceived as relevant motives. Surprisingly the employee competence development related to the research projects was a motive with the lowest importance. The attention has been paid also to the barriers limiting the cooperation from the firms' point of view. Three main categories of barriers were identified. The most significant is the category of the institutional barriers, including the slowness and inflexibility of the R&D system, together with the heavy administrative burden. The second category is related to the working practices within the cooperation and the quality of research services. The least problematic seems to be the interpersonal relationships and technical facility of the research organizations. A further research shall be focused on the institutional framework for the cooperation between the private and public sector in the Czech Republic and its comparison with frameworks used in other EU member countries.

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#### References

- [1] Audretsch, D. and Feldman, M. (1996). R&D Spillovers and the geography of innovation and production. *The American economic review*, vol. 86, iss. 3, pp. 630-640.
- [2] Boschma, R. (2005). Proximity and innovation: a critical assessment. *Regional studies*, vol. 39, iss. 1, pp. 61-74.
- [3] European Commission (2010a). *Europe 2020 - A strategy for smart, sustainable and inclusive growth* [online]. [cit.2018-02-25]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52010DC2020&from=EN>

- [4] European Commission (2010b). *Europe 2020 - Flagship Initiative Innovation Union* [online]. [cit.2018-02-25]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52010DC0546&from=EN>
- [5] European Commission (2010c). *Regional Policy contributing to smart growth in Europe 2020* [online]. [cit.2018-02-25]. Available at: <http://ec.europa.eu/transparency/regdoc/rep/1/2010/EN/1-2010-553-EN-F1-1.Pdf>
- [6] Friedrich, V., Hradecky, P., Michalcova, S. and Pomp, M. (2018). *Vybrané statistické metody* [Selected Statistical Methods]. Ostrava: EkF VŠB-TUO. (in print)
- [7] Fu, W. (2015). Knowledge Spillovers and Regional Innovation: The Case of Guangdong Province, China. In: *Towards a Dynamic Regional Innovation System*. Heidelberg: Springer-Verlag, pp. 17-43.
- [8] Harris, R. (2011). Models of regional growth: past, present and future. *Journal of economic surveys*, vol. 25, iss. 5, pp. 913-951.
- [9] Hendl, J. (2006). *Přehled statistických metod zpracování dat: analýza a metaanalýza dat* [Overview of Statistical Methods for Data Handling: Data Analysis and Meta-analysis]. Praha: Portál.
- [10] Jaffe, B. A., Trajtenberg, M. and Henderson, R. (1993). Geographic localization of knowledge spillovers as evidenced by patent citations. *The quarterly journal of economics*, vol. 108, iss. 3, pp. 577-598.
- [11] Klimova, V. and Zitek, V. (2016). Development innovation cooperation via competence centres. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 455-462.
- [12] Lopez-Bazo, E., Vaya, E. and Artis, M. (2004). Regional externalities and growth: Evidence from European regions. *Journal of regional science*, vol. 44, iss.1, pp. 44-73.
- [13] Malecki, E. J. (1980). Corporate organization of R and D and the location of technological activities. *Regional Studies*, vol. 14, pp. 219-234.
- [14] Malmberg, A. and Maskell, P. (2002). The elusive concept of localization economies: towards a knowledge-based theory of spatial clustering. *Environment and Planning A*, vol. 34, iss. 3, pp. 429-449.
- [15] Novotny, J., Nosek, V. and Jelinek, K. (2014). *EasyStat* [Online]. [cit.2018-02-25]. Available at: [https://web.natur.cuni.cz/~pepino/EasyStat\\_1\\_0\\_manual.pdf](https://web.natur.cuni.cz/~pepino/EasyStat_1_0_manual.pdf)
- [16] Paci, R. and Marrocu, E. (2013). Knowledge Assets and Regional Performance. *Growth and Change*, vol. 44, iss. 2, pp. 228-257.
- [17] Parent, O. and LeSage, J. P. (2012). Determinants of knowledge production and their effects on regional economic growth. *Journal of regional science*, vol. 52, iss. 2, pp. 256-284.
- [18] Storper, M. and Venables, J. A. (2004). Buzz: face-to-face contact and the urban economy. *Journal of economic geography*, vol. 4, pp. 351-370.
- [19] Suchacek, J., Seda, P., Friedrich, V. and Koutsky, J. (2017). Regional aspects of the development of largest enterprises in the Czech Republic. *Technological and economic development of economy*, vol. 23, iss. 4, pp. 649-666.
- [20] Theil, H. (1965). The Information approach to demand analysis. *Econometrica*, vol. 33, iss. 1, pp. 67-87.

## Application of Structural Gravity Equation on Trade Between the EU and BRICS Countries

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### **Abstract**

*The aim of this paper is to provide the evidence about the difference between structural gravity equation estimated as a fixed effect model compared to the newest methodology by Piermartini and Yotov (2016) on case of bilateral trade flows between the EU and BRICS countries. Using the fixed effect model, we found that using country-time specific factors can significantly increase the effect of some country-pair characteristics. Using the PPML estimator, we found a significant positive effect of the common border for the EU exports and colonial relationship for BRICS exports. we proved that the only estimation technique which offers the correct and unbiased gravity estimates is using the exporter-time, importer-time, and country-pair fixed effects.*

**Keywords:** BRICS, European Union, international trade, panel data, structural gravity model

**JEL Classification:** C33, F11, F14, F41

### **1. Introduction**

Trade relations among the developed and developing countries were significantly affected by globalization process during last decades. Many developing countries went through the economic transformation that enabled to create new trade relations with the EU members and other developed countries. Brazil, Russia, India, China and South Africa (BRICS) belong to those countries as well. During last two decades, these countries have become the regional giants with a great economic and political power. Russia and China have even considerably influenced the global relations that were dominated by the United States of America and European Union until that time.

Since the new millennium, the above-mentioned five emerging countries have developed closer economic and trade relations with each other in order to increase their economic power in the global economic system. Although the BRICS group was officially established only in 2010, the story of BRIC (without South Africa membership) began already in 2001 when Jim O'Neill, chief economist at Goldman Sachs, published an article called *Building Better Global Economic BRIC*. He expressed the opinion, as it turned out correctly, that BRIC political, economic and military power will increase in the following ten years and that especially China will have a significant impact on global economic changes.

Political and structural changes in BRICS during late 1980's and 1990's and their following tremendous economic growth had a significant effect on size and structure of the global world. For this reason, the European Union, advocating the progressive abolition of trade restrictions and lowering customs and other trade barriers in the long term, revised its position towards BRICS members to support the development of new trade relations. For those reasons, we will

estimate the structural gravity equation on the sample of bilateral trade flows between the EU and BRICS countries.

The paper is organized as follows: in the sub-chapter 1.1, we elaborate the newest findings and best estimation techniques of the structural gravity equation.

### ***1.1 Improvements of the Gravity Model Estimation***

The research provided in this paper is based on current knowledge of the theory of international trade, trade policy and econometric modelling of international trade flows using structural gravity model, a work-horse of international trade analysis. On the case of bilateral trade flows between the European Union and BRICS countries, we will show the difference between the structural gravity equation estimated as a fixed effect model compared to the newest methodology presented by Piermartiny and Yotov (2016). After the decades of solving the theoretical impediments of the gravity model, the issues of correct estimation of the gravity equation came to the forefront. In this paper, we will present the newest approach of Piermartini and Yotov (2016) and apply their method to bilateral trade flows between the EU and BRICS countries. These authors dealt not only with the correct specification of the gravity equation but also with the econometric issues that were overlooked for a long time but have a significant effect on the efficiency of the gravity estimates.

The gravity model has been used for decades in international trade and it has become one of the most popular tools for economic analysis. Its main purpose is to explain the extent of bilateral trade flows among countries. The theory behind the gravity model stands on Newton's general theory of gravitation (Fojtíková, 2013), which was transformed and applied to the economic science based on the assumption that the volume of trade between two countries depends on their size and distance. It was assumed that economic size has a positive effect on their mutual trade, while the distance representing a certain barrier to trade affects trade negatively. As Ševela (2002) claims, larger objects that are closer to each other should show stronger trade relationships.

Since papers of Anderson and van Wincoop (2003, 2004), it was considered that the problem of multilateral trade resistance was solve once for all. The correct gravity estimation should always include multilateral resistance terms (MRT). Baldwin and Taglioni (2007) call the omission of the MRT as a gold medal mistake of the gravity model estimation. Therefore, several methods how to estimate their effect were established. In the following research, we will use an approach based on Feenstra (2004) consisting of country fixed effects, which was improved by Olivero and Yotov (2012) by accounting for time effect. Their combination resulted in the newest approach to the gravity model estimation that is based on the exporter-time and importer-time fixed effect. We will show how using this approach will accommodate all other country-specific time-variant characteristics such as unilateral (e.g. export subsidies) or non-discriminatory trade policies (e.g. most favored nation tariffs). Moreover, as using fixed effect is important to address multilateral resistance issue, it is not possible to observe country-specific trade policies.

Estimating the zero trade flows between the country pairs used to be also a big challenge. Despite the fact that this issue usually appears when estimating disaggregated trade data, this effect may appear even on the aggregated level when estimating trade flows among developing countries in the long time horizon. Using the OLS estimator in logarithmic form, the zero trade flows will be simply dropped from the estimation sample. However, they can keep important information. To address this issue, we use the multiplicative form of the gravity equation by non-linear Poisson Pseudo-Maximum Likelihood estimator, which is advocated as the best

solution in a paper of Santos Silva and Tenreyro (2006). Piermartini and Yotov (2016) emphasized additional benefits of PPML estimator. As the trade data are full of heteroscedasticity, using the log-linear OLS estimator offers not only biased results but also inconsistent estimates, while PPML estimator accounts for heteroscedasticity.

The issue of endogeneity rises up when using several variables representing trade policy. To explain the problem of endogeneity in the gravity model estimation, one can imagine the example of reverse causality that two countries, which trade high values of goods between each other, are more likely to liberalize their mutual trade relations, *ceteris paribus*. Baier and Bergstrand (2007) advocate the use of country-pair fixed effects to account for the unobservable relations between the endogenous trade policy covariates with the error term in the gravity equations. Moreover, country-pair fixed effects will also account for any other unobservable time-invariant trade cost components. The last issue connected to trade policy effect estimation is the trade policy time inconsistency as trade policy decisions are not reflected in international trade immediately. Therefore, some papers use different types of time intervals. According to Olivero and Yotov (2012), the most promising are estimates gained from 3-year and 5-year interval trade data.

## 2. Problem Formulation and Methodology

The origin of the gravity model was empirically defined based on international trade flows analysis and therefore it missed any theoretical foundations during the first year of its existence. James E. Anderson was one of the first economist dealing with the theoretical foundation of the gravity equation applied to commodities. Anderson himself admits that „*its use (gravity equation) in economic policy is greatly disturbed by his undefined properties*“ (Anderson, 1979).

We follow derivation of the structural gravity equation by Anderson based on assumptions of Armington's product differentiation and constant elasticity of substitution. Theoretical structural gravity equation:

$$M_{ij} = \frac{Y_j Y_i}{Y^w} \left( \frac{t_{ij}}{P_j \Pi_i} \right)^{1-\sigma} \quad (1)$$

where imports of good  $M_{ij}$  purchased by country  $j$  from country  $i$  are given by income of importing country  $Y_j$ , production possibilities of the country of export  $Y_i$ ,  $Y^w$  defines world nominal income,  $t_{ij}$  represents transportation costs as a representative to barriers to trade and  $\Pi_i$  and  $P_j$  represents multilateral resistance terms. Considering only the trade between two countries, the income of country  $i$  gained from tradable goods sold to country  $j$  equals expenditure on imports of country  $j$  originating in country  $i$ , where:

$$(\Pi_i)^{1-\sigma} = \sum_{j=1}^N \left( \frac{t_{ij}}{P_j} \right)^{1-\sigma} \frac{Y_j}{Y^w}, \quad (2)$$

$$(P_j)^{1-\sigma} = \sum_{i=1}^N \left( \frac{t_{ij}}{\Pi_i} \right)^{1-\sigma} \frac{Y_i}{Y^w}, \quad (3)$$

are multilateral trade resistance terms showing the exporter's and importer's joint average trade barriers which both of them face with all of their possible trading partners.

## 2.1 Model and Data

In this section, we provide a detailed description of variables and explain all gravity equations that will be used in the following part reflecting the newest findings of the gravity methodology. Gravity models are usually very demanding on data inputs that provide an advantage of precise and stable estimations, however, it is cumbersome for data collection and correct data treatment. It is necessary to control for many effects that may not be significant per se but may influence final estimates of other variables.

In 2016, Piermartini and Yotov published a paper containing new approaches and best practices of the panel data gravity estimations. They formulated several recommendations to obtain reliable estimates of partial equilibrium model on aggregated data, which are theoretically consistent with the econometric specification. Their work is based on the foundations of structural gravity model derived by Anderson and van Wincoop (2003) who used a non-linear least squares estimation method, that recently appeared to be the most correct one, although it was hardly followed.

There are many other methods of gravity model estimation that are commonly used. The fixed and random effect models are based on the OLS methodology which has, however, several drawbacks that are very often the subject of criticism from an econometric point of view. Therefore, we chose the Poisson Pseudo-Maximum Likelihood (PPML) method as the main estimation method because it offers certain properties that help to overcome issues that usually accompany gravity estimations, hence this method should be never omitted when running the model. The PPML estimator is based on the maximum likelihood estimate of a Poisson distribution. In other words, it generates the parameter that maximizes the likelihood of the sample accounting for the exponential distribution. And this is the PPML biggest power because the gravity model data usually suffer from heteroscedasticity issues. Let us assume that we derive the gravity equation in the logarithmic form from the structural gravity equation of Anderson and van Wincoop (see equation 1). Adding a multiplicative error term  $e_{ij}$ , we get:

$$\ln M_{ij} = \ln Y_j + \ln Y_i - \ln Y^W + (1 - \sigma)[\ln t_{ij} - \ln P_j - \ln \Pi_i] + \ln e_{ij}, \quad (4)$$

where the mean of  $\log e_{ij}$  depends on higher-order moments of its distribution (Santos Silva and Tenreyro, 2006). If the error term is heteroskedastic, which is highly probable in the gravity models, the expected value of the error term depends on one or more regressors as it includes the variance term, hence our estimates would be biased and inefficient. Shepherd (2013) emphasizes that this kind of heteroscedasticity can be dealt with neither by applying a robust covariance matrix estimator since it affects the parameter estimates in addition to the standard errors. However, Santos Silva and Tenreyro (2006) suggest using the PPML method as an alternative to the log-linear OLS methods.

We will apply the methodology of Piermartini and Yotov (2016) which will be used to estimate the untapped trade potential between the EU and BRICS countries. We will use (i) panel data, (ii) time intervals that were set to three years, (iii) country-specific time-varying fixed effects, (iv) country-pair fixed effects, and (v) PPML estimator. To gain comparable results and analyse the effect of the most modern gravity estimation approaches, we will begin with the traditional OLS estimation of gravity equation:

$$\begin{aligned} \ln M_{ijt} = & \beta_0 + \beta_1 \ln Y_{it} + \beta_2 \ln Y_{jt} + \beta_3 \ln dist_{ijt} + \beta_4 \ln contig_{ijt} + \\ & \beta_5 \ln landlocked_{ijt} + \beta_6 \ln comlag_{ijt} + \beta_7 \ln colony_{ijt} + \beta_8 \ln cmea_{ijt} + \beta_9 \ln wto_{jt} + \\ & \beta_{10} \ln fta_{ijt} + \beta_{11} \ln eu_{memb}_t + \beta_{12} \ln eur_{usd}_t + \beta_{13} \ln lncy_{eur}_t + \beta_{14} \ln near\_wa_{ijt} + \varepsilon_{ijt}. \end{aligned} \quad (5)$$

The variable  $Y_{it}$  and  $Y_{jt}$  represent the size of trading countries and  $dist_{ijt}$  their bilateral distance. The variable  $contig_{ijt}$  means common border,  $landlocked_{ijt}$  represents landlocked country,  $comlag_{ijt}$  a common language, variable  $colony_{ijt}$  their colonial relationship, and  $cmea_{ijt}$  the membership in the Council of Mutual Economic Assistance in the past. In the case of trade policy variables, we use  $wto_{ijt}$  for the WTO membership,  $fta_{ijt}$  for a preferential trade agreement,  $eu\_memb_t$  for the EU membership,  $eur\_usd_t$  as Euro per USD exchange rate,  $lcy\_eur_t$  as local currency per Euro exchange rate and  $ear\_wa_{ijt}$  is effective applied tariff rate. Finally, the variable  $\varepsilon_{ijt}$  represents the error term, which captures all unobserved factors influencing their bilateral imports.

According to Piermartini and Yotov (2016), including the time dimension in gravity equation, one has to estimate multilateral resistance terms as exporter-time  $\pi_{it}$  and importer-time  $\chi_{jt}$  fixed effects to capture the dynamic of the gravity model. It is important to note that using exporter-time and importer-time fixed effects will absorb the size variables ( $Y_i$  and  $Y_j$ ) as well as all other observable and unobservable country-specific characteristics which vary over time:

$$\ln M_{ijt} = \pi_{it} + \chi_{jt} + \beta_1 \ln dist_{ijt} + \beta_2 contig_{ijt} + \beta_3 landlocked_{ijt} + \beta_4 comlag_{ijt} + \beta_5 colony_{ijt} + \beta_6 cmea_{ijt} + \varepsilon_{ijt} \quad (6)$$

Because of its favourable properties, we will reformulate the equation 6 in the multiplicative form and re-estimate it by applying the PPML estimator:

$$M_{ijt} = \exp([\pi_{it} + \chi_{jt} + \beta_1 \ln dist_{ijt} + \beta_2 contig_{ijt} + \beta_3 landlocked_{ijt} + \beta_4 comlag_{ijt} + \beta_5 colony_{ijt} + \beta_6 cmea_{ijt}]) * \ln \varepsilon_{ij} \quad (7)$$

The final stage of the gravity equation also includes the country-pair fixed effects  $\mu_{ij}$  that are able to control for endogeneity of covariates. However, their drawback is that they will absorb all bilateral time-invariant variables, that are used in the structural gravity equations:

$$M_{ijt} = \exp(\pi_{it} + \chi_{jt} + \mu_{ij}) * \ln \varepsilon_{ij} \quad (8)$$

Final estimates of the gravity equations are thus the country-time and country-pair specific, absorbing all time-variant and country-pair fixed observable and unobservable effects on bilateral trade flows. It means that all attributes, effects, and characteristics of countries and their mutual relations are absorbed in the coefficients that are specific for each country pair. All equations were tested to model misspecification. For this purpose, we used the Ramsey RESET test that detects whether any potential variables are omitted in the model specification. In the results, we will find that the only PPML estimator can pass this test while control for multilateral resistance terms.

### 3. Problem Solution

In this part, we will present the panel gravity estimates according to the methodology of Piermartini and Yotov (2016). Tab. 1 presents panel gravity estimates for both directions of trade flows between the EU and BRICS countries. As presented in sub-chapter 2.1, we estimate gravity equation using traditional OLS method without any panel effects which will serve only as a default model for results comparison. It is important to remind that estimates in the column (1) follow standard results of the gravity literature with a high coefficient of determination of 0.84 and 0.81. Most of the estimates are statistically significant and have the expected sign.

Results provided in the column (2) are estimated by the OLS method using specific country-time fixed effects according to the equation 6, which is consistent with the structural gravity model as it includes the multilateral resistance terms. By definition of the equation, both

exporter-time and importer-time fixed effects absorb all observable and unobservable country-specific characteristics varying over time that may have an effect on bilateral trade. Therefore, the coefficient of determination is higher than in the case of traditional OLS estimation. Using this method, we gain a much higher number of estimated parameters and observations. The estimates reported in column (2) follow the message from the results in column (1) in the sign and significance of variables. However, using country-time specific factors, we can observe that *landlocked<sub>ijt</sub>* and *cmea<sub>ijt</sub>* variables contain the correct sign and have a stronger effect on bilateral imports than traditional estimates of the OLS method. The effect of the common border, language, and former colonial relationships remain insignificant as in the previous results.

Following recommendations of Piermartini and Yotov (2016), the gravity equation 7 includes the full set of exporter-time and importer-time fixed effects re-estimated using the PPML estimator. The PPML estimates of this equation are presented in the columns (3). Using the PPML estimation method, we can make several conclusions that are different from the OLS. First, there is a significant difference in terms of magnitudes, significance and even signs of the estimates which are in line with findings of Piermartini and Yotov (2016) and Santos Silva and Tenreyro (2006). For example, the negative effect of distance is lower in the case of BRICS imports and even insignificant while the effect of the common border had become highly significant. In the case of the EU imports, the effect of distance is similar with the OLS and fixed effects estimates, however, the effect of colonial relationship increased and gained a high level of significance. The magnitude of the CMEA membership remained the same for BRICS imports but significantly decreased in the opposite direction. The p-value of the Ramsey RESET test reported at the bottom of the Tab. 1, reveal that the PPML estimator is the only one able to pass the misspecification test while using multilateral trade resistance terms.

**Table 1: Estimates of Panel Structural Gravity Model**

	BRICS imports from the EU				EU imports from BRICS			
	(1) OLS	(2) FE	(3) PPML	(4) PPML	(1) OLS	(2) FE	(3) PPML	(4) PPML
<i>Y<sub>i</sub></i>	1.15***				0.55***			
<i>Y<sub>j</sub></i>	0.61***				1.08***			
<i>dist<sub>ijt</sub></i>	-1.40***	-1.01*	-0.39		-0.84***	-0.72*	-0.79**	
<i>contig<sub>ijt</sub></i>	0.81	0.54	0.59***		0.18	0.20	-0.20	
<i>landlocked<sub>ijt</sub></i>	0.48***	-3.11***	-3.09***		-0.27	-0.57	-0.23	
<i>comlag<sub>ijt</sub></i>	0.88	0.12	0.31		0.27	0.15	-0.45	
<i>colony<sub>ijt</sub></i>	-0.37	0.27	0.37		0.07	0.69	1.32***	
<i>cmea<sub>ijt</sub></i>	0.64*	1.12***	1.19***		1.70***	1.77***	0.88***	
<i>wto<sub>ijt</sub></i>	0.31***				0.03			
<i>fta<sub>ijt</sub></i>	0.58***				-0.41			
<i>eu_memb<sub>t</sub></i>	0.26				-0.20			
<i>usd_eur</i>	-1.08***				-0.36**			
<i>lcy_eur</i>	-0.39***				-0.08			
<i>ear_wa<sub>ijt</sub></i>	-0.03**				0.02			
<i>_cons</i>	-3.73*	15.38***	9.66***	.76**	-6.63***	13.29***	14.52***	7.97***
Observations	857	1101	1101	1101	969	1064	1064	1064
Number of parameters	15	261	261	364	15	259	259	362
Exporter time effect	NO	YES	YES	YES	NO	YES	YES	YES
Importer time effect	NO	YES	YES	YES	NO	YES	YES	YES
Country pair effect	NO	NO	NO	YES	NO	NO	NO	YES
R <sup>2</sup>	0.838	0.927	0.977	0.995	0.810	0.942	0.948	0.976
RESET test	0.277	0.0000	0.141	0.243	0.004	0.000	0.039	0.282

Source: author's calculations (2018).



Finally, the columns (4) include results of the equation 8 that is modified by country-pair fixed effects to address potential endogeneity issues. Due to the perfect collinearity, using the country-pair fixed effects do not allow to include any gravity variables that do not vary over time. Therefore, we obtain more than 360 parameters that represent all specific properties of bilateral trade flows of each country pair. Using this kind of estimation technique, we cannot observe the determinants of bilateral trade flows *per se*, as they are included in the exporter-time, importer-time, and country-pair fixed effects, but we will obtain the best estimation solution of the gravity equation. The results of Ramsey RESET test confirmed the validity of the panel gravity model with a very high coefficient of determination.

#### 4. Conclusion

In this paper, we applied the newest methodology of the gravity model estimation on the sample of bilateral trade flows between the EU and BRICS countries. We found significant determinants of their mutual exchange of goods using the simple OLS and fixed effect estimation, and compared these methods with the most advanced estimation technique using Poisson Pseudo-Maximum Likelihood estimator and methodology of Piermartiny and Yotov (2016). Using a simple OLS estimation helps us to confirm the right way of gravity model estimation as the results have expected size and sign.

We found that using country-time specific factors can increase the effect of some country-pair characteristics, such as landlocked position of the country or former membership in the free trade area, then in case of the default OLS method. The effect of the common border, language, and former colonial relationships remained insignificant in most cases of the OLS estimation. It means that these attributes do not have any meaningful effect on bilateral trade flows between the EU and BRICS countries. Similar results were obtained using the PPML estimator. The only difference is a significant border effect for the EU exports and colonial relationship for BRICS exports. Finally, we proved that the only estimation technique which offers the correct and unbiased gravity estimates is using the exporter-time, importer-time, and country-pair fixed effects.

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#### References

- [1] Anderson, J. E. (1979). A Theoretical Foundation for the Gravity Equation. *American Economic Review*. Vol. 69, pp. 106-116.
- [2] Anderson, J. E. and van Wincoop, E. (2003). Gravity with Gravitas: A Solution to the Border Puzzle. *American Economic Review*. Vol. 93, No. 1, pp. 170-192.
- [3] Anderson, J. E. and van Wincoop, E. (2004). Trade Costs. *Journal of Economic Literature*. Vol. 42, No. 3, pp. 691-751.
- [4] Baier, S. L. and Bergstrand, J. H. (2007). Do Free Trade Agreements Actually Increase Members' International Trade Flows using Matching Econometrics. *Journal of International Economics*. Vol. 77, No. 1, pp. 63-76.

- [5] Baldwin, R. and Taglioni, D. (2007). Trade effects of the euro: A comparison of estimators. *Journal of Economic Integration*. Vol. 22, No. 4, p. 780–818. Circulated as Gravity for dummies and dummies for gravity equations, *CEPR DP5850*, and *NBER WP 12516*.
- [6] Feenstra, R. C. (2004). *Advanced international trade: theory and evidence*. Princeton, N.J.: Princeton University Press, c2004. ISBN 0-691-11410-2.
- [7] Fojtíková, L. (2013). Quantitative Evaluation of the EU's Export Potential to Russia Using the Gravity Model. In *Mathematical Methods in Economics 2013*, PTS I and II, 2013, pp. 171–176.
- [8] Olivero, M. P. and Yotov, Y. V. (2012). Dynamic Gravity: Endogenous Country Size and Asset Accumulation. *Canadian Journal of Economics*. Vol. 45, No. 1, pp. 64–92.
- [9] Piermartini, R. and Yotov, Y. V. (2016). Estimating Trade Policy Effects with Structural Gravity. *WTO Working Paper ERSD-2016-10*.
- [10] Santos Silva, J. and Tenreyro, S. (2006). The log of gravity. *The Review of Economics and Statistics*. Vol. 88, No. 4, pp. 641–658.
- [11] Shepherd, B. (2013) *The Gravity Model of International Trade: A User Guide*. Issue 2nd ed. United Nations publication. ISBN: 978-974-680-346-5.
- [12] Ševela, M. (2002). Gravity-type model for Czech agricultural export. *Agricultural Economics*. Vol. 48, No. 10, pp. 463–466.

## Typology of European Students on the International Practical Placements Market

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### Abstract

*The aim of this paper is created the typology of international college students (Generation Y) from the selected countries of European Union (Czech Republic, Slovakia, Bulgaria and Romania), who participated in International Practical Placements, specifically Summer Work and Travel Program in United States of America. Data were obtained by electronic questioning. Typology is based on attitudes and perceptions. This paper discusses the differences in the attitudes and perceptions of the college students to the international practical placements market. Attitudes and perceptions are concentrated into the ten factors, for example the experience with Work and Travel Program, perception of experience, benefits of the program, attitudes to travel. As the research methods the factor analysis and cluster analysis are used.*

**Keywords:** *attitudes, cluster analysis, factor analysis, generation Y, practical placements market*

**JEL Classification:** *A14, C38, M31, Z39*

### 1. Introduction

European higher education institutions have always engaged in a wide range of international activities with partner institutions from around the world, for example program Erasmus+, lectures by international lecturers, organization of international week at the university, internships abroad, excursions abroad (Hvalič-Touzery et al, 2017). These efforts are also being developed by students. Examples of these activities may be international practical placement. One of them is program called as Work and Travel program. This program offers many Czech and foreign agencies. Students can work abroad for up to 4 months and then for up to 30 days to traveling in the country (Czech Us [online], 2018). 332,534 students travelled to the USA in 2015. The largest share of these student is from Europe, second is Asia (Department of State [online], 2016). The aim of the paper is created the typology of international college students (Generation Y) from the selected countries of European Union, namely from Czech Republic, Slovakia, Bulgaria and Romania, who participated in International Practical Placements (Work and Travel Program in United States of America).

Internet connectivity and usage have risen dramatically in the past decade, providing people with easier means for obtaining information, and engaging in economic and social exchanges, (Lissitsa and Kol, 2016, p. 203). Increasing demand for the program is affected by the internet connectivity. Mobile phone development ant the Internet are the factors influencing this market. Mobile phones market is probably the most dynamic of any in the world. Degree and rate of change in technology and product innovation is staggering (Spáčil, 2016). Members of

Generation Y are typically people who were influenced by modern information technologies such as mobile phones (Pawlasová and Klézl, 2017).

The increasing demand for this program may also be based on generational differences. Paper is concentrated into the Generation Y. Generation Y is a collective term used to refer to those born between 1980 and 2000 (Eisner, 2005), also as the Internet or dot.com generation (Wong, Wan and Gao, 2017). Berg and Behrer (2011) describe members of Generation Y as people who were born between years 1980 and 1996. Members of Generation X are highly brand loyal and convinced, members of Generation Y (Millennials) appear to be the very opposite in favour of experimenting and instability (Spáčil and Teichmannová, 2016). Desire to experiment can be transferred to travel. Generation Y possess an extensive and significant purchasing power (Klapilová Krbová and Velčovská, 2016).

Many Generation Y have work experience while being a student before they graduate from school and enter the full-time workforce. It is assumed, therefore, that they have clear expectations about what they want to do, for whom they work, and who they want to be in the future (Wong, Wan and Gao, 2017, p. 142). Economic situation and expectations about personal job situation are dependent on generation, Generation Y is more positive than Generation X except for current situation of their personal job situation (Pawlasová, Spáčil and Valečková, 2014).

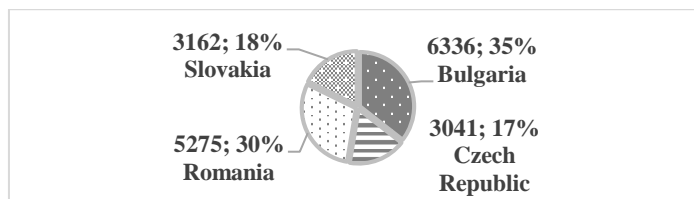
## 2. Methodology of the Research

Second chapter contains information about data collection methodology (primary quantitative research), methods of data analysis and theoretical background of factor analysis and cluster analysis.

### 2.1 Data Collection

Analysis is based on primary and quantitative data because it is descriptive research (Malhotra, Birks and Wills, 2012). Population is defined as European students and university graduates from Generation Y from Czech Republic, Slovakia, Romania and Bulgaria who participated in the Work and Travel program. Members of Generation Y are people who were born between years 1980 and 1996 (Berg and Behrer, 2011). Data was collected in spring 2016. Sample contained 288 respondents (quota sampling by country and gender). Quota sampling is suitable for descriptive research. Quota setting was based on J-1 visas issued in 2014. Bulgaria received 6,336 visas, Romania received 5,275 visas, Slovakia received 3,162 visas and Czech Republic received 3,41 visas (see Figure 1). Second applied quota is 50 % for each gender. Obtained data did not meet the quota. It did not balanced sample. Balance was conducted in the SPSS programme.

**Figure 1: Structure of Sample**



Source: Department of State [online], 2016; author's calculations

Primary research contain question on the attitude, country, gender, age and field of study. It was primarily focused on the 10 attitudes questions. Attitudes were measured on seven-point scale. Value 1 expressed agree and value 7 expressed disagree. This interval was chosen regarding the methods of analysis (factor analysis and cluster analysis). It is recommended to use the seven-point scale (Malhotra, Birks and Wills, 2012). Attitude is defined as a psychological and overall tendency to agree or disagree with a situation, after an evaluation process (Dumitrescu, Tichindelean, Vinerean, 2013, p. 468). There are ten statements for factor and cluster analysis, namely they are:

- Statement 1 – I like traveling and I like to meet foreign cultures.
- Statement 2 – I think that Work and Travel program is my best life experience.
- Statement 3 - I think that Work and Travel program improves my CV.
- Statement 4 - I had a lot of work experience abroad before I went to Work and Travel program.
- Statement 5 – Thanks to Work and Travel program I have learned to take care of myself.
- Statement 6 – Work and Travel program brought me some new friendships.
- Statement 7 – Work and Travel program involves many administrative matters.
- Statement 8 – Work and Travel program improved my English language.
- Statement 9 - I think that anyone who did not go abroad has lost a wonderful experience.
- Statement 10 – I have only positive feeling from Work and Travel program.

## 2.2 Data Analysis Method

Data was obtained by interrogation. Data has a quantitative character. Factor analysis and cluster analysis are used to fulfil the aim of the paper. Factor analysis will be used for the reduction of these (ten) statements. Factor analysis was also used to compare outcomes in different countries (Czech Republic, Slovakia, Bulgaria, Romania), results of new factors and comparison of incorporating the variable into new factors (identity and diversity in the country). Cluster analysis will be used for the design typology of international practical placements market.

Factor analysis is used for the reduction the statements. The results of the factor analysis (factor scores) are further used for cluster analysis. Varimax method was used to the factor rotation. New factors were created using Eigenvalue rules (Kaiser's rule). This rule ensures that the number of new factors explain a sufficient amount of file variability. Factor scores (necessary for cluster analysis) were created by regression.

Factor analysis is used in general (i) to identify underlying dimensions or factors, (ii) to identify a new, smaller, set of uncorrelated variables (iii) to identify a smaller set of salient variables from a larger set. Factor analysis has numerous marketing applications; in segmentation, in product research, in advertising studies and in pricings studies etc. (Malhotra, Birks and Wills, 2012)

Factor analysis is like multiple regression analysis. Factor analysis model may be represented as (Malhotra, Birks and Wills, 2012)

$$X_i = A_{i1}F_1 + A_{i2}F_2 + A_{ia}F_a + \dots + A_{im}F_m + V_iU_i \quad (1)$$

where,  $X_i$  =  $i$ th standardised variable,

$A_{ij}$  = standardised multiple regression coefficient of variable  $i$  on common factor  $j$ ,

$F$  = common factor,  
 $V_i$  = standardized regression coefficient of variable  $i$  on unique factor  $i$ ,  
 $U_i$  = the unique factor for variable  $i$ ,  
 $m$  = number of common factors.

Cluster analysis is used to classifying objects or cases into relatively homogeneous groups (segments). Clustering procedures are hierarchical or non-hierarchical. Hierarchical clustering is characterised by the development of hierarchy or treelike structure. Non-hierarchical methods are frequently referred to as k-means (classified as sequential threshold, parallel threshold and optimising partitioning). (Malhotra, Birks and Wills, 2012)

The second step of analysis contains the creation of a typology of the European students from Czech Republic, Slovakia, Bulgaria and Romania with using cluster analysis. Typologies are based on factor scores from factor analysis. Typologies were created based on hierarchical clustering methods (Ward's method and Squared Euclidean distance). Types of customer are further characterized by country, gender, age and field of study.

There are used the Pearson's chi-square test to find out dependency between typologies and country, gender, age and field of study. Chi-square test serves both as a goodness-of-fit test and as a test for the more common contingency table (Hendl, 2006).

Data were first inserted and adjusted in Microsoft Office Excel. Data matrix was further inserted into the IBM SPSS Statistics 25 program. All testing and results are performed at the 5% significance level.

### **3. Problem Solution**

The analysis is divided into three main parts as started in the methodology. The first part is variables reduction using the factor analysis (Chapter 3.1). The original ten variables are reduced to new three factors. After that European students are divided according to attitudes into two types with using the cluster analysis (Chapter 3.2). The third (last part) of the analysis is the characteristic of each types with the using descriptive statistics and Pearson's chi-square test (Chapter 3.2).

#### **3.1 Variables Reduction**

Research included ten variables (statements) namely (1) I like traveling and I like to meet foreign cultures, (2) I think that Work and Travel program is my best life experience, (3) I think that Work and Travel program improves my CV, (4) I had a lot of work experience abroad before I went to Work and Travel program, (5) Thanks to Work and Travel program I have learned to take care of myself, (6) Work and Travel program brought me some new friendships, (7) Work and Travel program involves many administrative matters, (8) Work and Travel program improved my English language, (9) I think that anyone who did not go abroad has lost a wonderful experience and (10) have only positive feeling from Work and Travel program.

Dimensional reduction was conducted to reduce the factors. It was used a factor analysis with extraction by principal components method and rotation Varimax. New factors were created using Eigenvalue rules (named as Kaiser's rule), if Eigenvalues is greater than one. Factor scores were created using regression. Factor scores is the variables using in the second step in cluster analysis.

Kaiser-Meyer-Olkin measure of sampling adequacy is an index to examine the appropriateness of factor analysis. High values (from 0.5 to 1) indicate that factor analysis is appropriate. Values below 0.5 imply that factor analysis may not be appropriate (Malhotra, Birks and Wills, 2012). Table 1 shows results of Kaiser-Meyer-Olkin measure of sampling adequacy for this data. Value is equal 0.829, factor analysis is appropriate.

Bartlett's test of sphericity is test statistic used to examine the hypothesis that the variables are uncorrelated in the population. The population correlation matrix is an identity matrix; each variable correlate perfectly with itself ( $r = 1$ ) but has no correlation with the other variables ( $r = 0$ ), (Malhotra, Birks and Wills, 2012). Results in Table 1 show signification (0.000). Signification is less than 0.05. Zero hypothesis is rejected. The correlation coefficients between the variables are not zero. Factor analysis is suitable for use.

**Table 1: Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,829
Bartlett's Test of Sphericity	Approx. Chi-Square	1126,266
	df	45
	Sig.	,000

Source: own elaboration (2018)

Eigenvalue represents the total variance explained by each factor (Table 2). Based on the eigenvalue criterion (Eigenvalue rule, Kaiser's rule), again three factors are extracted (based on ten variables or statements).

Percentage of variance is the percentage of the total variance attributed to each factor. The first factor accounts for 44.76 % of the variance, the second accounts for the 13.52 %, the third factor account for 10.24 % of the variance. Three factors explain a total 68.53 % of the variance. Malhotra, Birks and Wills (2012) say that it is recommended that the factors extracted should account for at least 60 % of the variance. This requirement is met.

**Table 2: Variance Explained**

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,476	44,761	44,761	4,476	44,761	44,761	2,925	29,246	29,246
2	1,352	13,525	58,286	1,352	13,525	58,286	2,795	27,953	57,200
3	1,024	10,245	68,530	1,024	10,245	68,530	1,133	11,331	68,530
4	,795	7,954	76,484						
5	,675	6,752	83,237						
6	,480	4,799	88,036						
7	,425	4,254	92,290						
8	,349	3,485	95,775						
9	,277	2,775	98,550						
10	,145	1,450	100,000						

Extraction Method: Principal Component Analysis.

Source: own elaboration (2018)

Table 3 shows the factor matrix after rotation (orthogonal rotation, varimax procedure). Orthogonal method of rotation minimises the number of variables with high loadings on a factor thereby enhancing the interpretability of the factors (Malhotra, Birks and Wills, 2012).

Factor loadings in the matrix represent the correlations between the factors and the variables. The first factor includes these original factors (new factor name: **improved skills through Work and Travel program**):

- Statement 2 – I think that Work and Travel program is my best life experience.
- Statement 3 - I think that Work and Travel program improves my CV.
- Statement 5 – Thanks to Work and Travel program I have learned to take care of myself.
- Statement 8 – Work and Travel program improved my English language.
- Statement 10 – I have only positive feeling from Work and Travel program.

The second factor includes three these original factors (new factor name: **passion for traveling**):

- Statement 1 – I like traveling and I like to meet foreign cultures.
- Statement 6 – Work and Travel program brought me some new friendships.
- Statement 9 – I think that anyone who did not go abroad has lost a wonderful experience.

The third factor includes these original factors (new factor name: **experience gained before Work and Travel program**):

- Statement 4 - I had a lot of work experience abroad before I went to Work and Travel program.
- Statement 7 – Work and Travel program involves many administrative matters.

**Table 3: Rotated Component Matrix**

**Rotated Component Matrix<sup>a</sup>**

	Component		
	1	2	3
Statement 10	,791		
Statement 3	,754		
Statement 8	,664	,438	
Statement 2	,643	,469	
Statement 5	,616		
Statement 1		,858	
Statement 9		,844	
Statement 6	,420	,723	
Statement 7		,375	,807
Statement 4	,407	-,424	,605

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Source: own elaboration (2018)



### 3.2 Typology of the European Students in Work and Travel Program

This Chapter contain analysis of attitude to Work and Travel program of European students. Students are divided according to attitudes into 2 types with using the cluster analysis. The types are then characterized by country, gender, age and field of study. The differences are analysed with using the descriptive statistics and Pearson’s chi-square test.

Hierarchical cluster analysis was used to determine an appropriated number some clusters. It was used a Ward’s method and interval measure, concretely Squared Euclidean distance. Using these methods, it was decided to create the two clusters of European students on international practical placement market.

The first cluster is named as **Adventurers**. Attitudes of these students are that they like meet foreign cultures and traveling, Work and Travel program brought some new international friendships.

The second cluster is named as **Pragmatic**. Main differences from the first segment is that pragmatic see Work and Travel program as the best life experience because it improves the CV and English language. They state that the program includes many administrative matters. Pragmatists consider the benefits and demands too. Pragmatists are more rational. Adventurers are more emotional. Mean values of factor score by cluster are in the Table 4.

**Table 4: Mean Values of Factor Score by Clusters**

Cluster Number of Case	Mean		
	REGR factor score 1 for analysis 1	REGR factor score 2 for analysis 1	REGR factor score 3 for analysis 1
Adventurers	,3380384	-,5238486	,4932585
Pragmatic	-,4011197	,6216041	-,5853055
Total	,0000000	,0000000	,0000000

Source: own elaboration (2018)

Dependences between typology and gender, age, country and field of study are tested using Pearson’s chi-Square test. Statistical testing is carried out at the 5% significance level. Significance for gender is equal 0.1, significance for age is equal 0.035, significance for country is equal 0.821 and significance for field of study is equal 0.322. There is statistical significance between typology and age. There is not statistical significance between typology and gender, country and field of study. Frequencies by the age are listed in the Table 5. There is the trend that adventurers are younger, and segment of pragmatics includes older respondents (see Table 5).

**Table 5: Crosstabs of Segments by the Age**

	Age			Total
	20 - 23	24 - 26	27 and more	
Adventurers	55,2%	58,8%	21,4%	54,3%
Pragmatic	44,8%	41,2%	78,6%	45,7%

Source: own elaboration (2018)

## 4. Conclusion

The aim of this paper is created the typology of international college students (Generation Y) from the selected countries of European Union (Czech Republic, Slovakia, Bulgaria and Romania), who participated in international practical placements, specifically Summer Work and Travel program in United States of America.

Research was based on primary and quantitative data. Data was obtained by questioning (electronic) in 2016. Population was defining as European students and university graduates from Generation Y from Czech Republic, Slovakia, Romania and Bulgaria who participated in the Work and Travel program.

Factor analysis was used for the reduction the original statements. There are three new factors, namely (i) improved skills through Work and Travel program, (ii) passion for traveling and (iii) experience gained before Work and Travel program. The results of the factor analysis (factor scores) were further used for cluster analysis.

Hierarchical cluster analysis was used to determine an appropriated number some clusters. Using these methods, it was decided to create the two clusters of European students on international practical placement market. The first cluster was named as Adventurers and the second cluster was named as Pragmatic. Adventurers are younger, and segment of pragmatics includes older respondents.

Two types of participants were identified. These types may have different behaviours. These differences will be part of the further research. It will focus on the purchasing decision making process, namely differences in problem recognition, information search, decision making, purchase and post-purchase behaviour.

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## References

- [1] Berg, J. van den and Behrer, M. (2012). *Jak cool značky zůstávají hot: marketing zaměřený na mladou “generaci Y” (How Cool Brands Stay Hot: Branding to Generation Y)*. Brno: BizBooks.
- [2] Czech Us (2018). *Work and Travel USA 2018* [online]. [cit.2018-03-05]. Available at: <https://czech-us.cz/work-and-travel-usa/>.
- [3] Department of State (2016). *Visa Statistics: Report of the Visa* [online]. [cit.2016-02-22]. Available at: <http://travel.state.gov/content/visas/en/law-and-policy/statistics.html>.
- [4] Dumitrescu, L. Tichindelean, M. and Vinerean, S. (2013). Using Factor Analysis in Relationship Marketing. In *International Economic Conference of Sibiu 2013 Post Crisis Economy: Challenges and Opportunities, IECS 2013*. Sibiu: Lucian Blaga University of Sibiu, pp. 465–475.

- [5] Eisner, S. P. (2005). Managing Generation Y. *SAM Advanced Management Journal*, vol 70, iss. 4, pp. 4-15.
- [6] Hendl, J. (2006). *Přehled statistických metod zpracování dat (Overview of Statistical Data Processing Methods)*. Praha: Portál.
- [7] Hvalič-Touzery, S. et al. (2017). Perspectives on Enhancing International Practical Training of Students in Health and Social Care Study Programs – A Qualitative Descriptive Case Study. *Nurse Education Today*, vol. 48, pp. 40-47.
- [8] Klapilová Krbová, P. and Velčovská, Š. (2016). Shopping Typology of Generation Y in the Czech Republic and Slovakia. In *International Economic Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 443-454.
- [9] Lissitsa, S. and Kol, O. (2016). Generation X vs. Generation Y – A Decade of Online Shopping. *Journal of Consumer Services*, vol. 31, pp. 304-312.
- [10] Malhotra, N.K., Birks, D. F. and Wills, P. (2012). *Marketing Research: an Applied Approach*. Harlow: Pearson.
- [11] Pawlasová, P. and Klézl, V. (2017). Factors Affecting Generation Y Customers' Satisfaction with online Group-buying Purchases in South Korea. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, vol. 65, iss. 6, pp. 2045-2054.
- [12] Pawlasová, P., Spáčil V. and Valečková J. (2014). Perception of EU Economic Situation by Generation Y. In *International Economic Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 533-544.
- [13] Spáčil, V. (2016). Brand Awareness of Mobile Phones Perceived by Generation Y in the European Context. In *International Economic Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 883-890.
- [14] Spáčil, V. and Teichmannová, A. (2016). Intergenerational Analysis of Consumer Behaviour on the Beer Market. In *International Conference Enterprise and Competitive Environment 2016*. Brno: Faculty of Business and Economics of Mendel University in Brno, pp. 487-495.
- [15] Wong, I. A., Wan, Y. K. and Gao, J. H. (2017). How to Attract and Retail Generation Y Employees? An Exploration of Career Choice and the Meaning of Work. *Tourism Management Perspectives*, vol. 23, pp. 140-150.

## Performance of EU Countries over Time and Its Spatial Autocorrelation

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### **Abstract**

*The European Union's main objective is to promote peace, follow the EU's values and construct Europe as a single economic space. There are many indicators to compare countries or regions including gross domestic product (GDP), gross national income (GNI), and others. The aim of this paper is to identify the homogeneity of these indicators in the European Union (across all member states) in three years – 1995, 2005 and 2015. The results identify the difference in a country's position over time and whether nation's resources are put to capital creation or declining towards abroad, too. To identify the presence of spatial structure, Moran's I and LISA are used. The other classical statistical methods we have used are K-W test or correlation coefficients.*

**Keywords:** comparison, GDP, GNI, spatial autocorrelation, the European Union

**JEL Classification:** F41, F43, F62, C21

### **1. Introduction**

The European Union (EU) is the outcome of a process of integration that started in 1950 with six original states (France, West Germany, Italy, The Netherlands, Belgium, and Luxembourg). It is a unique model of integration based on treaties among member states which created an institutional framework (Lyberopoulos, 2000). The establishment of the European Union is a combination of economic, monetary, social, cultural, and political relations bringing the member states closer together and leading to the implementation of common goals and values.

The EU countries are considered to be one of the world's most prosperous economic areas, however there are large economic disparities between its individual member states. The income disparities in the EU countries are important fields of the research of many authors, e.g. Grossman (2004), Peterson (2004) or Badircea et. al. (2016).

The paper focuses on measuring the income disparities using 2 basic macroeconomic indicators - gross domestic product (GDP) per capita and gross national product (GNI) per capita in the EU countries and on assessing their development during the existence of the European Union. The results of three years 1995, 2005, 2015 are evaluated using Moran index which is complemented by classical statistical methods, see Kotulic et. al. (2016), Sira, Vavrek, Pukala (2017), Stefko et. al., Vavrek (2017) or Vavrek, Kotulic, Adamisin (2015).

### ***1.1 Economic Integration as an Accompanying Phenomenon of the European Union***

Economic integration means that the economies of different countries are linked, and the trade barriers are eliminated within an area (Balassa, 1962). According to a business dictionary, economic integration means the elimination of tariff and non-tariff barriers to the flow of goods, services, and factors of production between a group of nations, or different parts of the same nation. Machlup (1977) designated also the first user of the term “economic integration”. Finally, in the contemporary economic theory, the economic integration is defined as the unification of economic policies among different states through the partial or full abolition of tariff and non-tariff restrictions on trade taking place among them prior to their integration (Baldwin, Wyplosz, 2008). Economic integration refers to the various types of agreements coordinating economic policies and regulations among countries. There has been a rapid increase in the number of regional trade agreements (RTAs) since the mid-1990s and the appetite for deep integration was reflected in the growth of European Union (EU) membership (Larue, 2018). Economic integration was a priority for all states without precisely defined competences of the European Communities and the member states. The system of economic integration has begun to change into a system of monetary integration, economic coordination, and a system of common policies (Paskrtova, Stolicna, Novackova, 2016). The goal of economic integration is the promotion of mutual trade and the increase of the level of welfare while leading to the increase of economic productivity of the states (Dalimov, 2009).

At a macro level, it is possible to find several forms of economic integration based on Balass (1961) including the following: Free trade area – tariffs and quantitative restrictions are abolished in the trade with goods and services, individual countries keep their own tariffs towards non-members. Customs union – apart from abolishing tariffs and quantitative restrictions, a common tariff is set for non-members. In a customs union, member states are joined in one commercial-political area in relation to the outside world. Common market – abolishment of trade restrictions but also different restrictions of the freedom of movement of production factors - a free movement of capital and labour. Economic union – provisions as by a common trade and moreover unification or at least a certain level of harmonization of economic policies in order to eliminate discrimination arising from the differences in these policies across individual countries. Monetary union – it assumes common currency which would reflect economic and finally also political union of member states. Complete economic integration – it assumes unification of monetary, fiscal, social and stabilization policies and requires the creation of a transnational governing body, the decisions of which are binding for all member states. Complete economic integration should result in a political union.

According to Allen (1963), economic integration involves at least two countries to abolish customs tariffs on the inner border between the states. Main benefits for the integrating countries include a free access to markets of the other member states and the increase of productivity. The regional integration in Europe not only affects static efficiency but can also have economically and statistically significant growth effects (Henrekson, Torstensson, Torstensson, 1997).

## **2. Problem Formulation and Methodology**

The subject of the analytical part of the given paper is the evaluation of 28 member states in the European Union (to 1.1. 2018) with the emphasis on the identification of the influence of a membership on the performance of its national economies. Selected macroeconomic indicators (GDP per capita, GNI per capita) are evaluated separately in two years, particularly

in the year 1995 and 2005 (the last enlargement of the members was in 2013) and the results obtained in such a way are subsequently compared with the aim to identify the differences in the performance of the countries also as a result of their EU membership. The countries are divided into two groups in particular years depending on whether or not they were members of the EU in the current year.

The differences among the groups of countries in the analysed years are monitored using selected moment characteristics. The differences between the GDI per capita values and GNI per capita values in particular years are monitored using the Mann-Whitney test. The results in the individual years which are modified by the GDP deflator are compared in pairs and also evaluated with the Sign test.

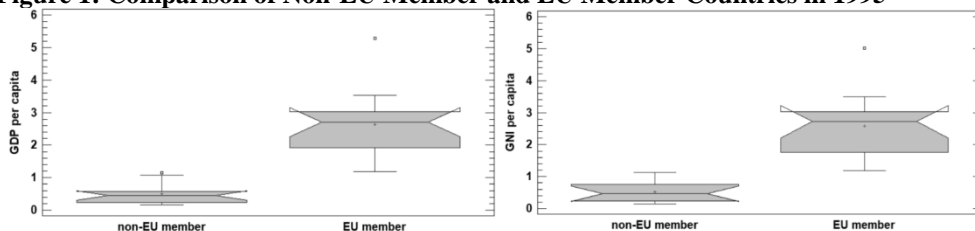
The last part is the monitoring of the differences in space in each of three given years. Since by using the Shapiro-Wilk test, the normality of the monitored parameters was not confirmed, a median was used as a mean value for the purposes of spatial autocorrelation. To monitor the spatial relations among the states regardless of their EU membership, the Moran's index and LISA were used:

The analyses are processed using publicly available data via the World Bank. The analyses are performed in the MS Excel and statistical software Statgraphics and Statistica.

### 3. Problem Solution

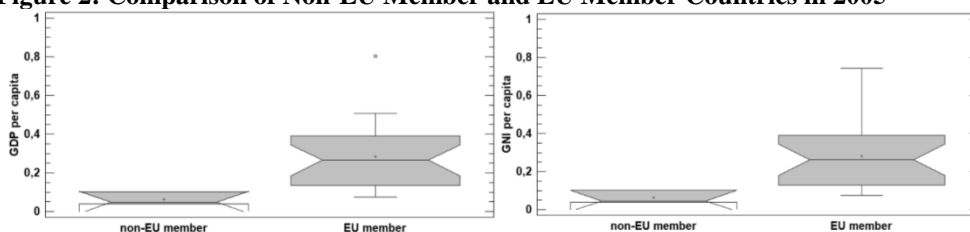
The growth of national economies as well as economic unions as a whole (e.g. the EU) is a current trend we can observe across the whole Europe. We assume that country's membership in such a union can have a positive influence on the development of its macroeconomic indicators over time.

**Figure 1: Comparison of Non-EU Member and EU Member Countries in 1995**



Source: author's calculations

In 1995, statistically significant differences among the countries that are, or, are not the EU members, were confirmed using GDP per capita ( $W = 195$ ;  $p \leq 0,01$ ), or GNI per capita ( $W = 180$ ;  $p \leq 0,01$ ). No GDP per capita of any of the countries outside the EU reaches the level of the EU members, with Cyprus being the country with the highest GDP per capita of 11488 EUR in this group. The best rated country in this year is Luxemburg with the GDP per capita almost 5 times higher compared to the values of Cyprus. Similar results can be observed also by the evaluation of the groups using GNI per capita as illustrated in Figure 1.

**Figure 2: Comparison of Non-EU Member and EU Member Countries in 2005**

Source: author's calculations

Again, the differences between the groups of countries ( $W_{GDP} = 72$ ,  $p \leq 0,05$ ;  $W_{GNI} = 71$ ,  $p \leq 0,05$ ) were confirmed. But as illustrated in Figure 2, the differences were not so considerable as in the year 1995. The main cause can be seen in the EU enlargement by 10 countries in 2004, the national economies of which did not have enough time to use the advantages of the membership in EU. The values in the group of the EU member states has improved in average with both indicators by more than 2000 EUR ( $\Delta_{GDP} = 2233$  EUR,  $\Delta_{GNI} = 2067$  EUR), which in combination with a decrease of the mean value of median indicates a positive skewness of the overall results.

### 3.1 Comparing the Indicators at the Level of Individual Countries

In the previous part, the difference between the groups of the EU member states and non-EU member states in a given period was monitored. In this part, the attention is paid to the changes between the years 1995 - 2005 and 2005 - 2015 at the level of individual countries with the focus on the changes caused due to the country's membership in the EU.

**Table 1: The Differences in Paired Comparison of Individual Countries**

	GDP per capita	GNI per capita
<b>1995 vs 2005</b>	5,10**	3,59**
<b>2005 vs 2015</b>	5**	3,59**

\*\*  $p \leq 0,01$

Source: author's calculations

After 10 years, we can observe statistically significant changes (Table 1), by the comparison using GDP per capita as well as GNI per capita. The same conclusions, i.e. the differences in comparing the pairs of years, can be observed also in the groups of countries, the status of which has not been changed in the given period, i.e. they were the EU member states in both monitored years. After the year 2005, only three countries joined the EU (Bulgaria, Romania, and Croatia) and their achieved results are not statistically different.

**Table 2: The Influence of the Country’s Status on the Evaluation of the Countries**

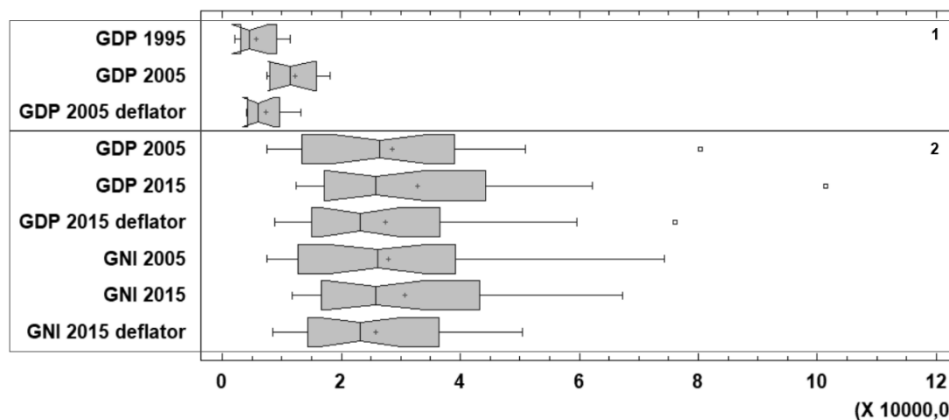
	Original data				GDP deflator used			
	GDP per capita		GNI per capita		GDP per capita		GNI per capita	
Change	Yes	No	Yes	No	Yes	No	Yes	No
1995 vs 2005	2,85**	4**	1,15	4,69**	1,58	3,06**	1,33	3,06**
2005 vs 2015	1,15	3,2**	1,15	2,8**	0	1,2	0	1,2

\*\* p ≤ 0,01

Source: author’s calculations

After using the GDP deflator, we observe the differences in the comparison of the pairs of years in the individual groups of countries. The change of the status of the countries did not cause the changes either in the values of GDP per capita or in the values of GNI per capita (Table 2) except data (respectively the structure of data) illustrated in Figure 3.

**Figure 3: The Differences Identified by Paired Comparison**



1 – country status changed 2 – country status not changed

Source: author’s calculations

### 3.2 Comparing the Indicators in Space

We assume that the EU membership brings also positive influence, the externalities that are subsequently reflected in the performance of the economies. When comparing the achieved results from the previous analyses, we can state that these results are considerably similar by using GDP per capita or GNI per capita. By the evaluation of these indicators in space, the EU countries are considered as a united area based on which a spatial matrix is created for the needs of Moran’s index.

From the point of view of a geographical distribution of these regions and despite the above identified differences, it is not possible to statistically confirm a significant spatial autocorrelation in all three monitored years by using GDP per capita as well as GNI per capita



**Table 3: Spatial Autocorrelation GDP per Capita, GNI per Capita**

LISA		GDP per capita / GNI per capita
1995	max	Germany
	min	Slovakia
2005	max	Belgium
	min	Slovakia
2005def	max	Belgium
	min	Hungary
2015	max	Belgium
	min	Hungary
2015def	max	Belgium
	min	Hungary

Source: author's calculations

The Moran's index in all three cases has achieved the values limiting to null, based on which we can consider these results as accidental or as spatially uncorrelated. Based on these results, we can still find clusters at a local level using LISA indicator (Table 3).

#### 4. Conclusion

We confirm the results of the previous research (Vavrek, Ardielli, Gonos, 2016), i.e. the evaluation of the countries based on selected macroeconomic indicators is a method often used in practice nowadays, the advantage of which is mainly a simple and basic comparison of national economies. These indicators may also include GDP per capita as well as GNI per capita. In practice, the comparison of countries (not groups of countries) is used since in the structure of the European Union, it is not possible to find a group homogenous from the point of view of several macroeconomic or social characteristics. Despite the intention to create a united European area, it is possible to observe significant differences in the comparison of individual countries which considerably determines the fulfilment of this vision. For more detailed results, we recommend comparing countries using more parameters, MCMD methods, cluster analysis or other methods of higher-order statistics. Based on above given analyses, it is not possible to claim that the country's membership in the EU will automatically positively influence the performance of an economy. In the future, the question of the advantageousness of the entry or exit from the European Union is drawn where a long-term membership in the EU expressed by comparing the years 1995, 2005, and 2015 is not a significant contribution for a country from the point of view of the development of GDP per capita and GNI per capita. Although these two indicators are methodologically different, these differences did not affect the results of the individual analyses.

#### Acknowledgements

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## References

- [1] Allen, R. L. (1963). Review of the Theory of economic integration. *Economic Development and Cultural Change*, vol. 11, iss. 4, pp. 449-454.
- [2] Badircea, R. et. al. (2016). Banking integration in european Context. *Amfiteatru Economic*, vol. 18, iss. 42, pp. 317-334.
- [3] Balassa, B. (1961). *The theory of economic Integration*. Connecticut: Yale University.
- [4] Baldwin, R. and Wyplosz, C. (2008). *Ekonomie evropské integrace*. Praha: Grada Publishing.
- [5] Dalimov R.T. (2009). The Dynamics of the trade creation and diversion effects under international economic integration. *Current Research Journal of Economic Theory*, vol. 1, iss. 1, pp. 1-4.
- [6] Grossman, E. (2004). Bringing politics back in: rethinking the role of economic interest groups in european integration. *Journal of European Public Policy*, vol. 11, iss. 4, pp. 637-654.
- [7] Henrekson, M., Torstensson, J. and Torstensson, R. (1997). Growth effects of european integration. *European Economic Review*, vol. 41, pp. 1537-1557.
- [8] Kotulic, R. et. al. (2016). Status of foreign direct investments and their relationship to selected economic indicator of the sustainable development in the Slovak Republic - localization factors of foreign direct investment allocation and their spatial differentiation. *Journal of Applied Economic Sciences*, vol. 11, iss. 1, pp. 86-96.
- [9] Laure, B. (2018). Economic integration reconsidered. *Canadian Journal of Agricultural Economics-Revue Canadienne D Agroéconomie*, vol. 66, iss. 1, pp. 5-25.
- [10] Lyberopoulos, C. (2000). *The European integration*. [online]. [cit.2018-02-10]. Available at: <http://www.xanthi.ilsp.gr/kemeseu/>.
- [11] Machlup, F. (1977). *A history of thought on economic integration*. New York: Columbia University Press.
- [12] Paskrtova, L., Stolicna, Z. and Novackova, D. (2016). United in diversity – common goals and different obligations of member states of the European Union. In *V kontexte aktuálneho vývoja a výziev pre členské štáty európskej únie – zborník vedeckých príspevkov*. Praha: Wolters Kluwer, pp. 81-107.
- [13] Peterson, J. (2004). America as a European power: the end of empire by integration?. *International Affairs*, vol. 80, iss. 4, pp. 613-629.
- [14] Sira, E., Vavrek, R. and Pukala R. (2017). The impact of development of insurance market and economy on the competitiveness of the country on example of V4 countries. *Ad Alta – Journal of Interdisciplinary Research*, vol. 7, iss. 2, pp. 194-198.
- [15] Stefko et. al. (2010). Marketing instrumentary in the process of project acceptance within the acceleration of back-warded regions development. *Ekonomicky casopis*, vol. 58, pp. 512-526.

- [16] Vavrek, R. (2017). Weight of TOPSIS technique parameter and its impact on assessment of municipalities in Slovak republic. *Scientific papers of the University of Pardubice*, vol. 24, iss. 39, pp. 236-246.
- [17] Vavrek, R., Ardielli, E. and Gonos, J. (2016). Members of the European Union as a single economic unit and its spatial autocorrelation. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 1060-1067.
- [18] Vavrek, R., Kotulic, R. and Adamisin, P. (2015). Evaluation of municipalities management with the topsis technique emphasising on the impact of weights of established criteria. *Lex Localis*, vol. 13, iss. 2, pp. 249-264.

## **Food Quality Perception in the Context of Product Origin in European Union Countries: A study of Generation Baby Boomers**

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### **Abstract**

*The paper is focused on food quality perception in the context of product origin in European Union countries from the perspective of Baby Boomers generation. Its aim is to discover whether consumers of this generation consider food product origin as an indicator of product quality, to analyse the role of product origin in their purchase decision, to identify preference for product origin, to compare perceived quality of products originating from the Czech Republic or other European Union countries, and to identify European Union countries associated with high-quality and low-quality food. Theoretical background is related to impact of country of product origin on product quality perception, also generation Baby Boomers is characterized. In empirical part, the results of research study are presented. A total of 206 Baby Boomers respondents in the Czech Republic were interviewed. Chi-square test was undertaken to determine whether the way how consumers perceive the food quality and origin depends on their socio-demographic characteristics.*

**Keywords:** *Baby Boomers, consumers, European Union countries, food products, food quality, product origin*

**JEL Classification:** *M31, L66, Q18*

### **1. Introduction**

Increasing consumer interest in food products origin is observed worldwide as a countertrend against the globalisation or as the result of the food safety scandals across the Europe over the past years. Publicized affairs shook consumer confidence in the quality and safety of food, e.g. biscuits contaminated with poison, food containing industrial salt, Salmonella in minced pork and beef, fruits containing pesticides, or cucumbers and sauerkraut with formic acid can be mentioned as examples on the Czech food products market (Czech Agriculture and Food Inspection Authority [online], 2018). For the last few years, the problem is also dual food quality. Discussion on the topic of different quality of food intended for the old and new member states of the European Union (EU) are officially conducted at least since 2011, when the Association of Slovak Consumers published a comparison of the same foods purchased in eight EU countries. In some cases, it turned out that in the markets of traditional EU countries (Germany and Austria) is offered goods having a better quality than in the new member states of the EU, including also the Czech Republic. According to the conclusion of the European Commission responding to this situation, food producers can change their products in the light of both, the market specifics and consumer preferences of individual EU member states. The only condition is to provide true information on the packaging (dTest [online], 2016). As a result, consumers are more interested in the origin of the food they buy. Also, their preferences of products from the domestic country are increasing (Velčovská, 2018).

The importance of product origin can vary in different age group of consumers, with particular tendency of older consumers to prefer domestic products (Marzilli [online], 2017). To the best of the authors' knowledge, a study analysing the topic from the perspective of Generation Baby Boomers is missing. Therefore, the paper is focused on this age cohort. Its aim to discover how Baby Boomers consumers perceive food quality in the context of product origin and what their preferences for product origin are. After the theoretical background of the topic, the methodology of the research is explained and research findings are discussed.

### ***1.1 Country of Product Origin***

There are many factors with influence on the consumer perception of food quality, e.g. price, packaging, brand, etc. Due to the growing globalization of markets bringing foreign competitors and exposing consumers to a wide range of foreign products, a crucial information cue, used by consumers as a measure of product quality, is country of origin (Velčovská, 2018; Kalicharan, 2014; Jarossová and Pazúriková, 2014).

The impact of country of origin depends on several variables. Important drivers are country image, national stereotypes, consumer ethnocentrism and animosity, brand familiarity and experience, type of product, and product involvement (Yang, Ramsaran and Wibowo; 2016). Some products are associated with a particular country owing to their legacy, culture or lifestyle, which automatically leads to perceive them as premium, e.g. French wine, Czech beer, Netherland cheese or Belgian chocolate. Other studies have shown that consumers tend to have a relative preference for or aversion against products originated from certain countries as they are influenced by the country image (Oberecker, Riefler and Diamantopoulos, 2008). On the other hand, people are often ethnocentric and favourably predisposed to their own country's products. These consumers will probably rate their country's products more favourably than those made in foreign countries (Baker and Ballington, 2002). Impact of country image on consumers' perception of product quality was surveyed e.g. by Kalicharan (2014), Yang, Ramsaran and Wibowo (2016). Image of the EU among Czech consumers was specifically examined in the research of Pawlasová, Spáčil and Valečková ([online], 2014).

Country of origin has a particularly significant impact in situation when the consumer decides between alternatives, compares the characteristics of similar products and finds that one of them comes from a country known for its high-quality products. The probability of purchasing this product made in a positively perceived country is much higher in comparison with competitive products (Kalicharan, 2014). Since the fact that brand strength is gaining the customers, their trust and loyalty (Kozel, Vaněk and Očko, 2016), country of origin effect is stronger in situations where consumers do not know much about the brand, where additional information is unavailable or difficult to get (Cristea, Capatina and Stoenescu, 2015).

Researchers underline the country of origin effect on consumers' purchase intention (e.g. Kalicharan, 2014; Yang, Ramsaran and Wibowo; 2016; Phau, Wang and Yang, 2008). However, Paul and Dasgupta (2010) argue that this effect may be indirect, mediated by four factors: brand awareness, brand associations, brand loyalty and perceived quality.

To obtain more complete information on the topic, it can be useful to look at the findings of the Special Eurobarometer survey from 2012, carried out in the EU member states on a sample of 26 593 respondents aged 15 years and over. The study was not directly focused on Baby Boomers consumers, however the 55+ age group, substantially corresponding with age boundaries of Baby Boomers, was included. Three quarters (76%) of EU citizens in the age 55+ see the product origin as important when buying food, what is noticeably higher value in

comparison with younger consumers aged 15-24 (only 57 % of them consider product origin as important) (European Commission [online], 2012). Also Marzilli ([online], 2017) confirms a higher interest of older consumers in product origin, 80 % of them (and only 68 % of Millennials) want to know where the products were manufactured. To compare the importance of product origin for respondents aged 55+ in individual EU countries, there are missing more detail data in the Eurobarometer study, only results for whole sample of respondents (15+) are available (data for the age category 55+ are traceable only across the EU, not for individual countries). In every EU member state except the Netherlands (47%), more than half of respondents regard the geographical origin of food products as important, but there are significant differences between levels of importance in individual states. The vast majority of respondents in Greece (90%) and Italy (88%) consider product origin as important, while in Belgium (56%) this proportion is substantially lower. In other EU countries, the importance of product origin ranges between 62 – 81 %, in the CR it is 80 % (European Commission [online], 2012).

An importance of factors affecting food choice specifically in the Czech food products market was analysed within the survey „Food and Czech consumer“ conducted in November 2015 on the sample of 1019 respondents 18+. The product origin is important for 39 % respondents. When asked about perception of domestic and foreign food quality, a higher confidence in domestic products was confirmed, whereas Poland, China and Germany are considered as the most problematic countries in terms of food quality (Czech Agriculture and Food Inspection Authority [online], 2016). Preference of domestic products over foreign ones was confirmed also by other researches (Velčovská a Del Chiappa, 2015; Baker and Ballington, 2002).

### **1.2 Generation Baby Boomers**

Although marketers are currently focusing mainly on younger consumer groups (e.g. Millennials), the Baby Boomers segment is becoming into the center of attention in many EU countries. The Baby Boomers (also called Me Generation, Baboo, Love Generation, Woodstock Generation, Happy Generation) were born during 1946 – 1964. They represent a cohort that is significant on its size, accounting for 26 % of the total workforce in the Czech Republic (Manpower Group Solutions [online], 2016).

Baby Boomers are focused on using their free time for their hobbies, sports, cultural activities and education (Vysekalová et al., 2011). Family and health are very important values to them. They look for natural and organic foods and they like things that are relevant and appropriate to their life stage, not age (Stewart [online], 2009). While the group may be aging, Baby Boomers do not want to be reminded of that fact (Wong [online], 2010). Regarding marketing to the Baby Boomers segment, they are brand loyal and less price sensitive if they believe they are getting a superior product and good value (Wong [online], 2010). With their age, preferences of domestic products and brands are increasing (Vysekalová et al., 2011). In terms of communication, Baby Boomers like information presented in simple facts with which to make decision. It is effective to use word-of-mouth communications from trusted advisors and friends. They are heavy consumers of television programming, they use Internet search engines, e-mail, they watch online videos about products and services, and they also occasionally make online purchases. Baby Boomers are also active on social networks, especially on Facebook, where they like to publish news and photographs of their grandchildren or from their last vacation (Coates [online], 2017).

## 2. Problem Formulation and Methodology

With respect to above-mentioned significance of the Baby Boomers segment and a higher interest of consumers in product origin, the main objective of the research was to identify the Baby Boomers attitudes to food product origin in the context of product quality. Data were collected in April and May 2016 in online and personal survey via the structured questionnaire. Adding a personal survey was necessary from the reason that some older respondents had a problem with filling the online questionnaire. Generation Baby Boomers individuals with at least a partial responsibility for family food purchases (recruited with filtering question) served as a population for the survey. The respondents were selected by quota sampling with respect to the role of women and men in household food purchases. In accordance with the results of KPMG study from 2016, women (79.6 %) prevailed over men (20.4 %) in the sample of respondents. The reason lies in the fact that regular purchases of food are made mainly by women (KPMG [online], 2016). A total of 206 respondents completed the questionnaire, their structure is presented in Table 1.

**Table 1: Structure of Respondents (%)**

Variable		%	Variable		%
Gender	men	20.4	Responsibility for food purchases	full	79.6
	women	79.6		partial	20.4
Education	bellow secondary	14.6	Socio-economic status	self-employed	10.7
	secondary	36.9		employee	41.7
	university	48.5		pensioner	47.6

*Note: Due to the same share of gender structure and structure based on responsibility for food purchases, chi-square test was applied to find if there is any clue between these characteristics. The relationship was confirmed, Sig. = 0.000, Cramer's V = 0.282. Full responsibility for family food purchases is typical for women (85.4 % of women vs. 57.1 % of men).*

Source: Own processing based on data from IBM SPSS Statistics 23.0

The IBM SPSS Statistics 23.0 and Microsoft Excel software were used for data analysis. Pearson Chi-square test at 0.05 significance level was applied to test the differences between variables. The hypothesis  $H_0$  for Chi-square test presumes no statistically significant differences among variables, the hypothesis  $H_1$  presumes dependency of variables. Cramer's V coefficients were counted to prove the strength of relationship between variables. These descriptors were used to interpret the coefficients: 0.00 and under 0.10 - negligible association, 0.10 and under 0.20 - weak association, 0.20 and under 0.40 - moderate association, 0.40 and under 0.60 - relatively strong association, 0.60 and under 0.80 - strong association, 0.80 and under 1.00 - very strong association (Rea and Parker, 2014).

## 3. Problem Solution

The results are structured into four sections: (1) food quality indicators, (2) attention given to the product origin, (3) preference of product origin and perception of Czech and foreign food quality, and (4) the EU countries associated with high-quality and low-quality food products.

### 3.1 Indicators of Food Quality

The first part of the study was aimed at identification of attributes associated by respondents with the term "food quality". Specifically, the role of product origin in domestic country was

analysed. Respondents could indicate up to three factors from the list shown. The results are presented in Table 2. Food quality is mostly associated with product made from natural ingredients, followed by product beneficial to health. One third of Baby Boomers have food quality associated with product originated from domestic country.

**Table 2: Associations with the Term “Food Quality“ (%)**

Associations	%
food product made from natural ingredients	70.9
food product beneficial to health	36.9
product originated from domestic country	34.0
fresh food product	32.0
nutritionally balanced food product	28.2
food product certified with quality label	21.4
food product under known brand/manufacturer	16.5

Source: Own processing based on data from IBM SPSS Statistics 23.0

Respondents were also asked how they recognize a high-quality food when shopping. They can choose two main indicators of quality from the list shown or complete their own factor. The quality food is identified mainly based on consumer previous experience (55.3 %) and information about product ingredients (46.6 %) on the packaging. Among Baby Boomers is 13.6 % respondents who use quality labels to recognize the product quality. Only 8.7 % use the country of product origin as the main indicator of product quality in the place of purchase.

### ***3.2 Attention Given to Product Origin During Purchases***

The product origin is searched regularly by 63.1 % of Czech Baby Boomers (46.6 % mostly and 16.5 % always), sometimes by 28.2 %, exceptionally by 6.8 % and never by 1.9 % of them. In comparison with previous research studies presented in the Chapter 1.1, Czech Baby Boomers are less interested in the geographical origin of food than Europeans aged 55+ (European Commission [online], 2012), but they pay more attention to food product origin than average Czech population 18+ (Czech Agriculture and Food Inspection Authority [online], 2016).

The results were analysed based on socio-demographic characteristics of respondents. The relation between attention given to product origin and respondents' responsibility for food purchases was confirmed, Sig. = 0.035. Cramer's V coefficient (= 0.224) indicates a moderate association between variables. More attention to product origin is paid by consumers with full responsibility for food purchases, 68.3 % of them monitor the product origin mostly (50.0 %) or always (18.3 %), in comparison with 42.8 % of respondents with partial responsibility for food purchases (33.3 % mostly and 9.5 % always check product origin when shopping).

### ***3.3 Preference of Product Origin and Perception of Czech and Foreign Food Quality***

Respondents were asked to express their food origin preferences. They could choose one of the following options: food from local/regional producers in the Czech Republic, food from the Czech Republic, food produced abroad. Czech Baby Boomers have a strong preference of products manufactured in the Czech Republic. Ninety-eight percent give priority to products from national (79.2 %), regional or local (18.8 %) producers, and only 2.0 % favor foreign food products. It would be interesting to know the reasons of strong patriotism of Czech Baby



Boomers, but this topic was not examined in the study. Probably, it could be because older people are looking at the world differently than e.g. Millennials or Generation Z. In their youth, there was not an enough consumer goods on the Czech market, they did not have opportunity to purchase foreign products and they could not travel. Baby Boomers are more conservative and less adaptive to changes. They want to hold on what they had. Preference of domestic products over foreign ones was confirmed also by other research studies (Velčovská a Del Chiappa, 2015; Czech Agriculture and Food Inspection Authority [online], 2016).

Another studies (Cristea, Capatina and Stoenescu, 2015; Kalicharan, 2014; Diamantopoulos et al., 2011; Phau, Wang and Yang, 2008) have shown that the country of product origin has an influence on the perception of product quality. Therefore, it was examined how Czech Baby Boomers perceive the quality of Czech food products in comparison with foreign ones. As results show, the perception of domestic and foreign food quality is ambiguous and according to respondents' opinion, different from country to country. Almost half of respondents (44.6 %) answered that food quality depends on a particular country where the food product was produced. One third (30.7 %) consider Czech products as good as foreign. Domestic products are perceived as having a higher quality than the foreign ones by 21.8 % Baby Boomers, on the other hand, the opposite attitude (i.e. foreign product are a higher quality) have only 3.0 % of respondents (Table 3).

According to results of Chi-square test, perception of food quality depends on respondents' responsibility for family food purchases (Sig. = 0.020, Cramer's V = 0.220), education (Sig. = 0.023, Cramer's V = 0.190), socio-economic status (Sig. = 0.001, Cramer's V = 0.233), and preference of food product origin (Sig. = 0.000, Cramer's V = 0.332). Cramer's V coefficients indicate weak or moderate associations between variables. The most convinced of the quality of domestic products are respondents with partial responsibility for food purchases (35.0 %), with bellow secondary education (40.0 %), with preference of domestic products over the foreign ones (26.3 %), and pensioners (29.8 %).

**Table 3: Perception of Czech and Foreign Food Quality (%)**

		Czech products are a higher quality.	Czech products are as good as foreign.	Foreign products are a higher quality.	It depends on the particular country.
Total		21.8	44.6	3.0	30.7
Responsibility for food purchases	full	18.5	43.2	3.7	34.6
	partial	35.0	50.0	0.0	15.0
Education	bellow sec.	40.0	53.3	0.0	6.7
	secondary	21.6	40.5	2.7	35.1
	university	16.3	44.9	4.1	34.7
Socio-economic status	self-empl.	0.0	45.5	9.1	45.5
	employee	18.6	41.9	0.0	39.5
	pensioner	29.8	46.8	4,3	19.1
Preference of food product origin	local, reg.	5.3	42.1	5.3	47.4
	domestic	26.3	45.0	1.3	27.5
	foreign	0.0	50.0	50.0	0.0

*Note: It should be noted that the country of origin preference can switch also from one product category to another. However, this factor was not the subject of investigation. The research study was focused on the overall category of food products, not on particular subcategories.*

Source: Own processing based on data from IBM SPSS Statistics 23.0

### **3.4 Countries of Associated with High-Quality and Low-Quality Food**

Following the topic, respondents named EU countries associated with high-quality and low-quality food products. Czech Baby Boomers believe in the quality of their domestic products the most, Czech Republic was mentioned by 44.2 % of respondents as the country with high-quality food. On the second position, respondents rank Germany (38.8 %). Among other countries associated with high-quality food are France (12.6 %), Switzerland (6.8 %), Austria (5.8 %), and Italy (5.9 %). On the contrary, Poland was mentioned the most often as the EU country with food of poor quality (62.1 %). Only 2.9 % of respondents have associated their own country, i.e. the Czech Republic, with food products of poor-quality.

## **4. Conclusion**

To summarize the findings, the Baby Boomers consumers prefer domestic, regional or local food products and believe in their quality. Most of them check the product origin during purchases, however they do not use the product origin as the main indicator of product quality in the place of purchase, they rely primarily on their previous experience and information on the composition and nutritional value of the product. In comparison with previous research studies, Czech Baby Boomers are less interested in the geographical origin of food products than average EU population aged 15+ as well as EU population aged 55+ (European Commission [online], 2012), but they pay more attention to food product origin than average Czech population 18+ (Czech Agriculture and Food Inspection Authority [online], 2016). Comparison between Baby Boomers in the CR and other EU countries cannot be done because of missing data connected to this age cohort in individual EU countries. Only the results related to population aged 15+ are available. Among these EU consumers, Czechs pay above-average attention to geographical origin of food products. In individual EU countries, food product origin is important for 47 % (the Netherlands) to 90 % (Greece) of consumers. The level of importance in the CR is 80 %, what ranks Czech consumers (together with Slovaks, Lithuanians and Finnish consumers) on the fifth position among EU member states, behind an Greek (90 %), Italian (89 %), Slovenian (81 %) and Hungarian (81 %) consumers (European Commission [online], 2012).

When focusing on food quality, almost one third of Czech Baby Boomers consider Czech products as good as foreign, one fifth perceive them as being a higher quality than the foreign ones. The Czech Republic was also mentioned most often as the country with high-quality food, followed by Germany and France, whereas Poland is perceived as the country with food of poor quality. A higher confidence in domestic products and distrust in food coming from Poland was confirmed also in the research study „Food and Czech consumer“ from 2015 (Czech Agriculture and Food Inspection Authority [online], 2016). On the contrary, the perception of Germany as the country with problematic food quality was not confirmed, Czech Baby Boomers perceive Germany as the country producing a high-quality food.

It can be concluded that the country of origin has potential to be a powerful attribute that can be used to gain competitive advantage. Czech food producers are recommended to include the product origin as a part of their marketing strategy and to highlight the quality of their local, regional or national products in promotion campaign. It is obviously necessary to provide consumers relevant, complete and accurate information in an understandable form, taking into account suitable media with respect to Generation Baby Boomers specifics.

It is necessary to consider some limitation of the research. The study was conducted in the Czech Republic with focus on Generation Baby Boomers only. It could be useful to conduct more extensive study and compare consumers' attitudes in more EU countries or to include

other consumer generations into the comparison. Cluster analysis could be used with the purpose to create a consumer typology based on consumer attitudes to food product origin. The future research could be also focused on identification of specific drivers of product origin. The importance of product origin depends on the product category, therefore this topic can be developed.

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### **References**

- [1] Baker, M. J. and Ballington, L. (2002). Country of origin as a source of competitive advantage. *Journal of Strategic Marketing*, vol. 10, iss. 2, pp. 157–168.
- [2] Coates, L. (2017). *How to make your side hustle your main hustle (from a woman who did it)* [online]. [cit.2018-02-15]. Available at: <https://www.forbes.com/sites/forbescommunicationscouncil/2017/09/26/five-things-you-need-to-know-about-marketing-to-baby-boomers/#49ed13de4e55>.
- [3] Cristea, A., Capatina, G. and Stoenescu, R. D. (2015). Country-of-origin effects on perceived brand positioning. *Procedia Economics and Finance*, vol. 23, pp. 422–427.
- [4] Czech Agriculture and Food Inspection Authority (2018). *Press releases* [online]. [cit.2018-02-04]. Available at: <http://www.szpi.gov.cz/en/2017.aspx>.
- [5] Czech Agriculture and Food Inspection Authority (2016). *Potraviný a český spotřebitel 2015* [online]. [cit.2018-02-05]. Available at: <http://www.szpi.gov.cz/clanek/tz-2016-vyzkum-cesky-spotrebitel-zada-stejne-kvalitni-potravin-y-jako-evropsky.aspx>.
- [6] Diamantopoulos, A., Schlegelmilch, B. and Paliawadana, D. (2011). The relationship between country-of-origin image and brand image as drivers of purchase intentions. *International Marketing Review*, vol. 28, iss. 5, pp. 508–524.
- [7] dTEST (2016). *Rozdílná kvalita potravin v EU* [online]. [cit. 2018-02-04]. Available at: <https://www.dtest.cz/clanek-5156/rozdilna-kvalita-potravin-v-eu>.
- [8] European Commission (2012). *Special Eurobarometer 389: Europeans' attitudes towards food security, food quality and the countryside* [online]. [cit.2018-01-10]. Available at: [http://ec.europa.eu/public\\_opinion/archives/ebs/ebs\\_389\\_en.pdf](http://ec.europa.eu/public_opinion/archives/ebs/ebs_389_en.pdf).
- [9] Jarossová, M. A. and Pazúriková, V. (2014). Traditional and Regional Foods from the Slovak Consumer's View. In Proceedings of the 5th international scientific conference on trade, international business and tourism: Application of knowledge in process of business dynamization in Central Europe. Bratislava: EKONÓM publishing, pp. 197–206.
- [10] Kalicharan, H. D. (2014). The effect and influence of country-of-origin on consumers perception of product quality and purchasing intentions. *International Business and Economics Research Journal*, vol. 13, iss. 5, pp. 897–902.

- [11] Kozel, R., Vaněk, M. and Očko, P. (2016). The Importance of Brand at the Public University. In *International Scientific Conference on Marketing Identity - Brands We Love*. Trnava: University of Ss. Cyril and Methodius, pp. 163-174.
- [12] KPMG (2016). *Nákupní zvyklosti v ČR* [online]. [cit.2018-02-21]. Available at: <https://assets.kpmg.com/content/dam/kpmg/pdf/2016/05/KPMG-Nakupni-zvyklosti-v-CR-2016.pdf>.
- [13] Manpower Group Solutions (2016). *Total Workforce Index* [online]. [cit.2018-02-19]. Available at: <https://www.manpowergroup.cz/wp-content/uploads/2018/01/Total-Wokrforce-Index-Czech-Republic-market-report.pdf>.
- [14] Marzilli, T. (2017). *Millennials show less concern over a product's origin than older shoppers* [online]. [cit.2018-02-13]. Available at: <https://www.forbes.com/sites/brandindex/2017/01/04/millennials-show-less-concern-over-a-products-origin-than-older-shoppers/#537c343c7827>.
- [15] Oberecker, E. M., Riefler, P. and Diamantopoulos, A. (2008). The consumer affinity construct: conceptualization, qualitative investigation, and research agenda. *Journal of International Marketing*, vol. 16, iss. 3, pp. 23–56.
- [16] Paul, R. and Dasgupta, S. (2010). Country-of-Origin Image as an Antecedent to Brand Equity. *Journal of International Business*, vol. 2, iss. 2, pp. 37–57.
- [17] Pawlasová, P., Spáčil, V. and Valečková, J. (2014). Image of the European Union Perceived by Generation Y. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 524-533.
- [18] Phau, I., Wang, X. and Yang, Z. (2008). Does country-of-origin matter in the relationship between brand personality and purchase intention in emerging economies? *International Marketing Review*, vol. 25, iss. 4, pp. 458–474.
- [19] Rea, L. M. and Parker, R. A. (2014). *Designing and conducting survey research: A comprehensive guide*. San Francisco, CA: Jossey-Bass.
- [20] Stewart, K. L. (2009). *Marketing to SWELS: Seniors with Energetic Lifestyles* [online]. [cit.2018-01-12]. Available at : <http://www.newhope.com/managing-your-business/marketing-swels-seniors-energetic-lifestyles>.
- [21] Velčovská, Š. (2018). Generation Y's Perception of Product Origin and its Labelling in the Context of Food Quality and Safety. *Amfiteatru Economics*, vol. 20, iss. 47, pp. 46–61.
- [22] Velčovská, Š. and Del Chiappa, G. (2015). The food quality labels: Awareness and willingness to pay in the context of the Czech Republic. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, vol. 63, iss. 2, pp. 647–658.
- [23] Vysekalová, J. et al. (2011). *Chování zákazníka. Jak odkrýt tajemství „černé skříňky“*. Praha: Grada.
- [24] Wong, E. (2010). *AARP's Marketing Chief Pardo: '50 Is the New 50'* [online]. [cit.2018-02-06]. Available at: <http://www.adweek.com/brand-marketing/aarps-marketing-chief-pardo-50-new-50-106978/>.
- [25] Yang, R., Ramsaran, R. R. and Wibowo, S. (2016). A conceptual model for country-of-origin effects. *Asia Pacific Journal of Advanced Business and Social Studies*, vol. 2, iss. 1, pp. 96–116.

## Regional Approaches to the Interactive Assessment of Territorial Competitiveness, Sustainability of Development and Quality of Life

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### **Abstract**

*The article deals with the process of evolution from the point of view of social sciences, whose key components are usually considered competition, sustainable development and quality of life. It is divided into three main parts. The first one focuses on assessing the relationship between regional competitiveness and sustainable development. In this context, the hypothesis is verified that in the long term, both concepts are merging. The next part discusses their interactions with the component of quality of life, including the irreplaceable role of integration processes as the basis of social movement. The final part describes the possibilities of conceptualizing the findings with an emphasis on improving the quality of the business and social environment and the evaluation of the effectiveness of the projects. In this context, the article closely follows to rethinking of the European Union's cohesion policy.*

**Keywords:** cohesion policy, competitiveness, integration, quality of life, sustainability,

**JEL Classification:** A13, Q56, R11, R58

### **1. Introduction**

Despite the current positive economic development, we should not forget that the recent global economic crisis has essentially weakened the belief that using mathematical models can reliably predict economic growth and other basic macroeconomic variables and subsequently formulate a consistent economic policy. In line with this, there is an increasing demand for such procedures that would allow a more accurate response to the new economic, social and environmental challenges generated by societal development. In the case of the European Union the main focus is on interdisciplinary innovations of cohesion policy taking into account the structural and spatial differentiation of national or transnational systems. These innovations should focus on the key processes of societal evolution, the driving force of which is competition, the optimal direction is sustainable development and the main purpose being to improve the quality of life. In this context, it is about application of five fundamental principles.

- The principle of **holism** considers the systems as whole, not just as a collection of its parts. Its application opens the door to transition from neoclassical reductionist approaches to complex approaches respecting the openness of societal systems.
- The principle of **integration** means horizontal and vertical interconnection of parts into higher units that mirror the hierarchical organization of social systems in respects to the political, entrepreneurial, and social preferences of the population.

- The principle of **sustainability** assessed from a complex perspective including the economic, social, and environmental dimension of development, with a specific emphasis on the dynamic balance of mutual relations.
- The principle of **general utility** refers to activities that respect the legitimate interests of public administration and other entities in increasing the long-term benefits resulting from the allocation of public resources.
- The principle of **effectiveness**, understood as optimizing the selection of public projects – to frequently confuse the concepts of efficiency and effectiveness P. Drucker (Drucker, 1993) states that "Efficiency is doing things right; effectiveness is doing the right things".

## 2. Evaluation of the Relationship Between Competitiveness and Sustainability of Development

The concept of competitiveness is primarily related to the business sphere. Its definition is not settled, and only its simplest variant "competitive company is the one that exists", signaling links to sustainable development, can be considered as generally acceptable. Even more controversial is the territorial application, where we would come to the conclusion that the competitiveness of the given territory corresponds to the sum of the relevant values for the local companies. This approach ignores the fact that in the event of its loss, firms are pushed out of the market, while states and regions "only" lose their position (in addition, there are no clear relations - for example, redundancies of employees in order to maintain the competitiveness of firms have negative impacts on standard of living). Territorial competitiveness is defined particularly at a country level, while the competitiveness of regions is relatively rarely defined - the following table lists the most common types of definitions.

**Table 1: Frequently Mentioned Regional Competitiveness Dimensions**

Author	*1	*2	*3	*4	*5	*6	*7	*8	Source
Dijkstra Annoni, Kozlovska	-	-	-	+	-	+	+	-	Annoni, Dijkstra, Gargano 2017
Martin, Tyler	-	+	-	+	-	-	-	+	Budd, Hirmis 2004
OECD	-	-	+	+	-	-	-	+	Balkytė, Tvaronavičienė 2010; Gryszel 2017
Porter	+	+	+	-	-	+	+	-	Porter 1995
EC Report	-	-	+	+	+	-	-	+	Budd, Hirmis 2004; Lengyel 2016
Storper	-	+	-	+	-	-	-	+	Borozan 2008
Viturka	+	-	+	-	-	-	-	-	Vrtěnová 2009

\*Legend: 1=the use of regional resources which determine regional potential, 2=the ability to attract capital, technology, and know-how from outside sources, 3=increasing productivity, 4=improving standards of living, 5 maintaining high employment rate, 6=set of characteristics which determine the attractiveness of the regions, 7=creating conditions for business development, 8=the ability of international competition.

Source: Kruk (2017)

From many definitions of territorial competitiveness, we consider it appropriate to mention the EU definition, which states "the ability of (regions) to generate, while being exposed to external competition, relatively high income and employment levels" (European Commission, 1999). According to Storper, the competitiveness of a region is its ability to attract and retain firms with a stable or growing market share, ensuring a stable or rising standard of living for those who participate in it (Storper, 1997). Many definitions state that territorial competitiveness cannot be measured solely on the basis of economic performance, but should also take into account the relevant assets of the socio-economic environment. According to these definitions, competitiveness depends on the values of shareholders and customers and the financial strength that determines the negotiating ability in the competitive environment and the potential of people and technologies necessary to implement the required strategic changes. Competitiveness can only be sustained long-term if there is a dynamic balance between these factors (Feurer and Chaharbaghi, 1994). The well-known World Competitiveness Reports, published by IMD Lausanne since 1989, take into account the political, social, and cultural dimensions of competitiveness, as interpreted on the basis of sophisticated analysis of selected countries. On the other hand, the similarly respected microeconomic index of global competitiveness from the World Economic Forum does not take into account the importance of social and environmental factors (this approach reflects significant methodological and technical difficulties associated with their measurement). In general, competitiveness measurement allows us to assess its partial aspects and provide to the public and private sphere selected information about the development trends of individual countries or regions. In this context, it is worth highlighting the growing consensus on the benefits of a holistic approach to multi-criteria index creation (see, e.g., Honová, Hon, 2014).

Regarding the relationship between territorial competitiveness and sustainability of development, we consider the crucial question of verifying the hypothesis that in the long-term period the concepts of competitiveness and sustainability are basically considered analogous. In this context, however, we are dealing with a significant problem of the vagueness of the relevant definitions - an example of this is the oldest definition of sustainable development by G. Brundtland, interpreting it as "a development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987). For the macroeconomic analysis of the relationship between the relative amount of income and the quality of the environment, the Kuznets curve is often used to show the significant increase of environmental pollution in the initial phase of the economic growth, but after reaching a certain level of per capita income there is a positive turnaround of this trend (Kuznets, 1955). The followers of Kuznets demonstrate this hypothesis with the argument that with increasing income per capita people will voluntarily take better care of the environment. Though this behavior was not unambiguously confirmed, there are a number of examples that show this hypothesis could work in practice. For example, when income in the US in the 1960s increased considerably, people began taking a number of steps to reduce water and air pollution. On the other hand, rising incomes per capita in China or India do not point to a clear approach for a strategy for improving the environment (Rogers et al., 2008). It can be noted that due to market transformation, a number of environmental problems have been pushed into the background in the Czech Republic (Viturka, Vystoupil, 2017). Despite the increasing importance attributed to the relationship between competitiveness and sustainability, no generally acceptable model has yet been established. It is clear that the achievement of fundamental progress in the complex analysis of a given relationship is likely to be expected in a more distant perspective due to the diversity of stakeholder views and the enormous complexity of feedback and emerging synergies (Wilson, 2008).

### 3. Evaluation of the Relationships Between Competitiveness and Quality of Life

The comparative position of states and regions according to the level of social development can be understood as a cumulative result of long-term development of components of a competitiveness and quality of life. The definition of quality of life is also not unified; as logical it seems that it should reflect the degree of consistency between individual and social preferences (see e.g. Constanza et al., 2008). It is worth highlighting the increasing importance of quality of life for residential attractiveness, which together with investment attractiveness are the basic determinations of territorial development. The remaining component of sustainable development is in accordance with its universal nature to be integrated on the basis of a functional relationships within the two preceding components (social and natural systems are only partially compatible and the legislative protection of natural ecosystems is so irreplaceable). In this respect, costs and psychosomatic factors play a significant role.

The relationship between competitiveness and quality of life obviously depends on the level of development achieved, which takes into account the relevant changes in individual and social preferences. These changes have a strong impact on public expenses, whose priorities are gradually shifting from traditional support to development of production structures (such as technical infrastructure or investment incentives) to promoting sustainable development (e.g. education, health and social services). These questions were dealt with by the American Economist Porter, who formulated the four development stages of the competitiveness of countries (Porter, 1990):

1. competitiveness driven by the use of production factors,
2. competitiveness driven by investment,
3. competitiveness driven by innovation,
4. competitiveness driven by improving the quality of life.

For territorial quality assessments it is an appropriate sociological approach based on objective indicators of well-being reflecting the vision of desirable social development (Diener, Suh, 1997). At country level, the well-known Human Development Index published by the UNDP is based on three indicators: average life expectancy at birth, average length of education and GNP per capita. In other examples, SDG Index and Dashboard Reports focus on the assessment of the social and environmental component of development using the 17 indicator categories (Bertelsmann Stiftung and SDCN, 2017), and Global Liveability Ranking from The Economist Intelligence Unit. On the lower levels there is ranking of the quality of life of the world's metropolises, based on factors influencing the influx of talent and multinational companies. The index includes 39 indicators grouped into 10 basic categories: politics, economy, social environment, health, education, public services, leisure, consumer goods, housing and the natural environment. Another example of evaluation of quality of life in metropolitan regions is the Quality of Life Index, publishing by the Swiss Institute of BAK Economics. A total of 27 indicators are grouped into three basic categories (Pechlanger, Bachinger, 2010): economic environment (40%, e.g. hourly wage, tax burden, rent), social environment (40%, e.g. safety, standard of health services, supply of leisure time activities), and the environment (20%, e.g. number of rainy days, distance from the sea, public transport services). An interesting example is the Regional Quality of Living Index of Dutch research institute PBL, which integrates indicators of existing indexes and applies them at NUTS 2 level (Lagas, 2014). It is necessary to mention the multi-criteria evaluation of quality of life in Czech regions (Viturka et al., 2013). Its results show only slightly above-average dependence between the quality of the business and social environment, conditioned by the adverse effects of urban and environmental factors. In general, the interest in researching these issues is



increasing in the world and to a certain extent also in the Czech Republic (see, for example, Anders, Withey, 2012 or Fojtíková, Staničková, Melecký, 2016).

#### 4. Regional Conceptualization of the Examined Components

This conceptualization should be based on an in-depth analysis of the possibilities of competitiveness support, where golden rules defined by IMD can be used (Garelli, 2006; Margan, 2012):

- create a stable and predictable legislative environment,
- work on a flexible and strong economic structure,
- invest in traditional and technological infrastructure,
- support private savings and domestic investments,
- develop attractiveness for foreign direct investment,
- focus on the quality, speed, and transparency of government and administration,
- harmonize the relationships between wage levels, productivity and taxation,
- shape the social system by reducing income gaps,
- invest in education, including lifelong learning,
- maintain a balance between local and global economies.

Subsequently, the rules of the support of quality of life were formulated, which are oriented towards the European Union and optimized on the conditions of the Czech Republic:

- create a legislative environment ensuring the equality of citizens before the law,
- develop cooperation between the public and private spheres,
- care for the environment, and the natural and cultural heritage,
- stimulate the development of urban networks,
- improve social inclusion tools,
- strengthen the motivation tools, self-sufficiency, and tax powers of municipalities,
- increase the residential attractiveness of municipalities for current and potential residents,
- optimize territorial systems of education, health, and social services,
- support the development of civic activities,
- reduce the incidence of pathological phenomena.

When developing regional development concepts, it is appropriate to base around the territorial quality assessment of the business and social environments, which have strong links to the urban structure as the most stable components of social systems (see, e.g., Viturka et al., 2013). In the case of EU Member States, these concepts should also take into account the results of current discussions on perspectives of EU cohesion policy (European Union, 2017). In this context, we consider two issues of particular importance. The first concerns economic and social changes induced by globalization and political integration that objectively increases the importance of transnational and regional levels involvement in decision-making processes. The acute need for adequate responses to these changes has stimulated the usage of a system of pole and axes of development as the most significant concentration of socio-economic activities with the greatest potential for response and innovation as the leading factor of progress, which is not only a matter for individual companies (Žitek, Klímová, 2016). In this context, however, there is a strengthening of centralized management functions into the main metropolises, which leads to changes in the position of the regions, and thus to the rise of new divergent tendencies (see Viturka et al., 2017). These tendencies can be regulated, to a certain extent, through integrated strategies that support the dissemination of knowledge and the centrifugal reallocation of traditional industries. The overall outcome of the processes described above is the creation of ever more complexly structured regions with mostly positive

impacts on the cohesion of social systems. From the point of view of the Czech Republic, it is worth it to assign the importance of renewing traditional developmental axes connecting Prague with the most important metropolises of the neighboring countries. We also consider the quality of the institutional environment as one of the most important factor of public administration performance, which significantly influences the long-term success of the implementation of development concepts and projects. This conclusion is consistent with the fact that the lowest level of public administration in the EU concerns the least developed regions – in the Czech Republic it is primarily NUTS 2 Northwest (European Union, 2017).

Under the conditions of deepening globalization, the need for multi-criteria evaluation of the potential benefits of both public, and private projects in the spirit of principle "think globally, act locally" is logically increasing. Especially in the public sector, effectiveness comes more to the fore as part of the well-known concept 3E (effectiveness, economy, effectivity). Mainly due to the limited possibilities of monetary formulation, the multi-criteria evaluation of the effectiveness of large investment projects should be based on non-monetary criteria (e.g. relevance, usefulness, integration, stimulation and sustainability in the case of liner constructions). It is worth stressing that inappropriate project selection only on a CBA basis, cannot be offset by its effective implementation, and the assessment of its effectiveness can be considered as necessary part of the pre-investment phase (Víturka, Pařil, 2015).

## 5. Conclusion

The future of countries and regions is to optimally combine the main components of societal development with an emphasis on a consistent economic policy and integration strategies aimed at the overall improvement of its qualitative parameters. In line with changes in the ideological understanding of quality of life in democratic countries, the relationship between economic development and environment is becoming less confrontational and more complementary. This approach takes into account the importance of diverse feedbacks for the successful development of societal systems. In this context, it is necessary to mention strategic reflections of the future shape of EU cohesion policy, in particular the question of how much money should be allocated outside the less developed regions in order to achieve a higher aggregate level of added value. From a general point of view, it is clear that in order to realize the visions and strategies outlined above, there must be changes in the overall concept of public administration with an emphasis on integration of government policies. In this context, it is necessary to mention the ESPON program, which aims to support territorial cooperation between the EU countries in order to promote the dissemination of knowledge between public authorities and other actors at all hierarchical levels and thus contribute to the achievement of the objectives of cohesion policy.

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## References

- [1] Andrews, F., M., Withey, S., W. (2012). *Social indicators of well-being: Americans' perceptions of life quality*. New York: Springer Science & Business Media.
- [2] Annoni P., Dijkstra L., Gargano N. (2017). The EU regional competitiveness index

2016. *Working Paper, No 2*. Brussels: European Union.
- [3] Balkytė A., Tvaronavičienė M. (2010). Perception of competitiveness in the context of sustainable development: Facets of 'sustainable competitiveness'. *Journal of Business Economics and Management*, vol. 11, iss. 2. pp. 341-365.
- [4] Bertelsmann Stiftung a Sustainable Development Solutions Network (2017). *SDG index and Dashboard Report, Global Responsibilities*. New York: Pica Publishing.
- [5] Borozan D., Regional competitiveness: some conceptual issues and policy implications. In *Fourth Interdisciplinary Symposium*. Poreč: University of Osijek, pp. 50-63.
- [6] Budd L., Hirmis A. (2004). Conceptual framework for regional competitiveness. *Regional Studies*, vol. 38, iss. 9, pp. 1015-1028.
- [7] Constanza, R. et al. (2008). An Integrative Approach to Quality of life, Measurement, Research and Policy. *Surveys and Perspectives Integrating Environment and Society*, vol. I, iss. 1, pp. 17-21.
- [8] Diener, E., Suh, E. (1997). Measuring quality of life: economic, social and subjective indicators. *Social indicators research*, vol. XL, iss. 1-2, pp. 189-216.
- [9] Drucker P. F. (1993). *The Effective Executive - The Definitive Guide to Getting the Right Things Done*. New York: Harper Business.
- [10] European Commission (1999). *Sixth Periodic Report on the Social and Economic Situation of Regions in the EU*. Brussels: Commission of the European Communities.
- [11] European Union (2017). *Seventh Report on Economic, Social and Territorial cohesion*. Luxembourg: Publications Office of the European Union.
- [12] Feurer, R., Chaharbaghi, K. (1994). Defining Competitiveness: A Holistic Approach, *Management Decision*, vol. XXXII, iss. 2, pp. 49-58.
- [13] Fojtiková, L., Staničková, M., Melecký, L. (2016). Modelling of human capital and impact on EU regional competitiveness. In Sánchez, L. J., Poza-Plaza E., Rodriguez, L. A. (eds.). *Modelling Human behaviour: individuals and organizations*. Hauppauge, USA: Nova Science Pub., pp. 133-164.
- [14] Garelli, S. (2006). *Competitiveness of nations: The Fundamentals, World Competitiveness Yearbook*. Lausanne: International Institute for Management Development.
- [15] Gryszel, P. (2017). Inteligentna' specjalizacja a konkurencyjność regionów turystycznych, *Folia Turistica*, iss. 42, pp. 31-53.
- [16] Honová, I., Hon, M. (2014). Competitiveness indices methodology and its impact on ranking of selected EU countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 253-261.
- [17] Lengyel I. (2016). *Competitiveness of metropolitan regions in Visegrad countries*. [online]. [cit.2017-11-01]. Available at: <https://doi.org/10.1016/j.sbspro.2016.05.241>
- [18] Kruk, H. (2017). Similarities between sustainable development and competitiveness of the regions - theoretical approach. *Modern management review*, vol. XXII, iss. 2, pp. 71-86.

- [19] Kuznets, S. (1955). Economic Growth and Income Inequality. *American Economic Review*, vol. 45, iss. 1, pp. 1-28.
- [20] Lagas, P., Kuiper, R., Dongen, F., Rijn, F., Amsterdam, H. (2014). *PBL report 1271 - Regional Quality of Living in Europe*. PBL Netherlands Environmental Assessment Agency: Monitor Infrastructuur en Ruimte.
- [21] Margan, F. (2012). Competitiveness in the EU on the Context of the Globalized Economy, In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 188-198.
- [22] Pechlanger, H., Bachinger M. et al. (2010). *Lebensqualität und Standort-attraktivität: Kultur, Mobilität und regionale Marken als Erfolgsfaktoren*. Berlin: Erich Schmidt Verlag.
- [23] Porter, M., E. (1990). *The Competitive Advantage of Nations* [online]. [cit.2015-11-03]. Available at: <https://hbr.org/1990/03/the-competitive-advantage-of-nations>.
- [24] Porter M., E., Linde C. (1995). Green and competitive: ending the stalemate, *Harvard Business Review*, vol. 73, iss. 5, pp. 120-134.
- [25] Rogers, P., Jalal, K., Boyd, J. (2008). *An introduction to sustainable development*. London: Earth scan.
- [26] Storper, M. (1997). *The Regional World: Territorial Development in a Global Economy*. New York: Guilford Press.
- [27] Viturka, M., Wokoun, R., Krejčová, N., Tonev, P., Žitek, V. (2013). The Regional Relationship between Quality of Business and Social Environment: Harmony or Disharmony? *Ekonomie a management*, vol. XVI, iss. 2, pp. 22-40.
- [28] Viturka, M., Pařil, V. (2015) Regional assessment of the effectiveness of road infrastructure projects. *International journal of transport economics*, Pisa: Fabrizio Serra editore, vol. 42, iss. 4, pp. 507-528.
- [29] Viturka, M., Vystoupil, J. (2017). Nadčasové rozjímání nad dvěma významnými atlasy vytvořenými v Brně. In *XX. International Colloquium on Regional Sciences Proceedings*. Kurdějov: Masaryk University, Faculty of Economics and Public Administration, pp. 966-973.
- [30] Viturka, M., Pařil, V., Tonev, P., Šařinka P., Kunc, J. (2017). The Metropolisation Processes - A Case of Central Europe and the Czech Republic. *Prague Economic Papers*, vol. 26, iss. 5, pp. 505-522.
- [31] Vrtěnová L. (2009). Evaluation of factors of regional competitiveness. In *Third Central European Conference in Regional Science*. Košice: Technical University of Košice, Faculty of Economics, pp. 1404-1412.
- [32] Wilson, J. (2008). Territorial Competitiveness and Development Policy. *Orchestra Working Paper Series in Territorial Competitiveness No 2008-2*. San Sebastián: Instituto Vasco de Competitividad.
- [33] World Commission on Environment and Development (1987). *From One Earth to One World: An Overview*. Oxford: Oxford University Press.
- [34] Žitek, V., Klímová, V. (2016). *Aplikace konceptu regionálních inovačních systémů a implikace pro regionální politiku*. Brno: Masarykova univerzita.

## Individual Contributions to Collective Convergence

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### Abstract

*Economic convergence is a much discussed issue in the research community for a long time. It is much analyzed in the context of the integration of the economies in the European Union (EU) due to its importance in increasing cohesion among the member states and thereby strengthening the EU.  $\beta$ - and  $\sigma$ -convergence are two mostly used metrics in this regard. Such metrics investigate the convergence among all the economies under consideration. However, to analyze the growth of a specific economy, a metric with a more in detail investigation capability is expected. In this paper, we propose catching-up  $\beta$  ( $c\beta$ ) metric. The proposed metric can provide with more information regarding the growth of a specific economy that might help in making monetary decisions.*

**Keywords:**  $\beta$ -convergence, convergence, european integration, individual convergence, steady state

**JEL Classification:** C10, C20, C50

## 1. Introduction – Background of Economic Convergence

In economics, there are many theories and practices for measuring economic performances of different countries or regions. For analyzing the performances of the unions or integrations of different economies, such as European Union (EU), convergence is a much studied hypothesis. Upon the economic and monetary union of EU, the study and analysis of convergence among the economies of the EU countries has attracted many researchers (Brada and Kutan, 2001; Dvoroková, 2014; Gomez, 2008; Haviernikova, 2014; Soukiazis and Castro, 2005; Staničková, 2012; Taylor, 1999). The economists have primarily divided the analysis the convergence into two categories: nominal convergence and real convergence (Dvoroková and Hodula, 2014). In this paper, we focus on real convergence.

Traditionally, the real convergence is regarded as a decrease of economic differences among different regions or countries (Melecký, 2012). In the process of convergence, lower-income economies are expected to catch up with the higher-income economies in terms of different measures for economic condition, such as GDP per capita (ECB, 2015; Sala-I-Martin, 1996). Mathematically, the process is viewed as

$$\frac{y_{t_1}^a}{y_{t_1}^b} < \frac{y_{t_2}^a}{y_{t_2}^b}, \quad (1)$$

where  $a$  and  $b$  are lower- and higher-income economies, respectively,  $y$  represents per capita income of an economy at a given time, and  $t_1$  and  $t_2$  are the initial time and a later time, respectively, when the incomes are calculated.

## 2. Economic Convergence Metrics

Beta ( $\beta$ )-convergence and sigma ( $\sigma$ )-convergence are two popularly used concepts for the measurement of convergence. The  $\beta$ -convergence happens when lower-income economies follow the *catching up* process to grow more rapidly than the higher-income ones. On the other hand, the  $\sigma$ -convergence denotes lessening the dispersion of the levels of incomes of different economies.

For the  $\beta$ -convergence (Pfaffermayr, 2009), the growths of GDP per capita the economies in a time period are plotted against the GDP per capita the economies at the beginning of the time period, and a regression line as equation 2 is fit to the points on the plot.

$$\frac{1}{T} \log \left( \frac{y_0^i}{y_T^i} \right) = \alpha + \beta \log(y_0^i) + \gamma Z_i + \varepsilon_i, \quad (2)$$

where the equation's left part is the average of per capita GDP growth of country/economy  $i$  during time period from 0 to  $T$ ,  $y_j^i$  is the economic level of  $i$  at time  $j$ , and  $Z_i$  represents exogenous factors,  $\alpha$  is the level constant,  $\varepsilon_i$  is a random component, and  $\beta$  and  $\gamma$  are coefficients. When the value of  $\beta$  is negative for a group of economies, it indicates the existence of convergence phenomenon in them. The  $\beta$ -convergence basically refers to the faster convergence of the countries which have not yet reached their steady-states.

$\sigma$ -convergence indicates whether the dissimilarities among the economic levels of different countries or regions are decreasing over time, i.e., the presence of the catching up effect (Lucke, 2008).  $\sigma$ -convergence can be mathematically written as

$$\sigma_{t_1}^2 > \sigma_{t_2}^2, \quad (3)$$

where  $t_1$  is the initial time of a considered time period,  $t_2$  is the end of the period, and  $\sigma_t^2$  is the variance of the logarithm of the GDP per capita in the countries under consideration at time  $t$ .

## 3. The Proposed Metric

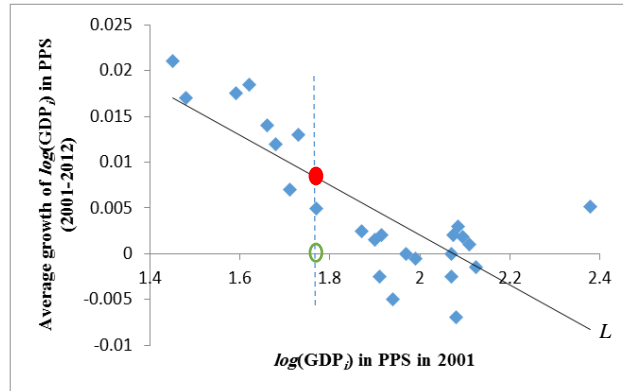
Both the  $\sigma$ - and  $\beta$ -divergence can be caused due to the low growth of smaller economies and/or high growth of larger economies. However, the aim of forming a union of some economies, such as EU, is at the growth of the economies. Hence, growth of larger economies should also be welcomed. Therefore, the main focus can be put on the low-growth of the smaller economies to ensure the overall growth of the union.

Again, traditional  $\sigma$ - and  $\beta$ -convergence focuses on the growth rates of the economies on a target time period. Hence, it shows the situation/condition of the economies in that particular time period. It does not speak about the trends of growths. In some situations, despite satisfactory growths of the smaller economies in a particular time period, a slower convergence may be observed due to the high growth of the larger economies. On the other hand, a  $\beta$ -convergence may still be observed even if the growths of all the economies decrease. Such a convergence, of course, is not expected, but the traditional  $\beta$ -convergence does not reflect such situations differently.

In this work, we propose a metric, *catching-up  $\beta$  ( $c\beta$ )*, which tries to reflect the trend of growth of the economies focusing on  $\beta$ -convergence. We follow the regression line on plot for testing

$\beta$ -convergence (Figure 1 shows such a plot). The economies falling under the regression line are actually having lower growth than what is expected in comparison with other economies under consideration. With respect to the current time period, the  $c\beta$  metric mainly focuses on the growth of these economies in the next time period.

**Figure 1:  $\beta$ -convergence in EU 2001-2012; ( $\beta = -0.027$ )**



Source: Authors’ calculations (Dvoroková, 2014)

A value for  $s_k^{t_p}$  is shown by the hollow circle on the x-axis, and the corresponding  $l_{g_{kt_p}}$  point is shown by the solid circle on the regression line  $L$ .

Let us suppose  $n$  economies  $e_0, e_1, \dots, e_n$ , where the sizes of the economies (in per capita GDP or logarithm of GDP, for example) are  $s_0^{t_p}, s_1^{t_p}, \dots, s_n^{t_p}$  at the beginning of a time period  $t_p$ , and the average growth rates of the economies during  $t_p$  are  $g_0^{t_p}, g_1^{t_p}, \dots, g_n^{t_p}$ , respectively. If the growth rates are plotted with respect to the sizes of economies, we will have a plot similar to what is shown in Figure 1.  $L$  is the approximated regression line.

Let us use the notation  $l_{g_{kt_p}} = L(s_k^{t_p})$  to represent the expected convergence point for the economy  $e_k$  to be on the convergence line. When  $l_{g_{kt_o}} = g_k^{t_p}$ , the growth of economy  $e_k$  can be thought to be in harmony with the  $\beta$ -convergence phenomenon observed in the concerned union of economies while  $l_{g_{kt_o}} < g_k^{t_p}$  indicates more growth of  $e_k$  than the required value to be on the regression line. On the other hand,  $l_{g_{kt_o}} > g_k^{t_p}$  means the growth of the economy  $e_k$  is less than what is the expected to ensure  $\beta$ -convergence. Accordingly, the  $n$  economies can be divided into two sets  $U_{t_p}$  and  $O_{t_p}$  as

$$U_{t_p} = \{e_k | l_{g_{kt_p}} > g_k^{t_p} \text{ and } k = 1, 2, \dots, n\}, \tag{4}$$

$$S_{t_p} = \{e_k | l_{g_{kt_p}} \leq g_k^{t_p} \text{ and } k = 1, 2, \dots, n\}. \tag{5}$$

Here the  $U_{t_p}$  is the set of the *undergrown* economies which are lagging to catch up with the  $\beta$ -convergence, while  $S_{t_p}$  can be thought to be set of the economies with comparatively *satisfactory* growth as the union of the  $n$  economies are concerned.

The proposed  $c\beta$  metric mainly focuses on the growth of the economies in  $U_{t_p}$ . Again, as mentioned earlier, we propose to track the growth rates in the next time period  $t_{p+1}$  too. Hence, we find the *undergrowing* economies  $U_{t_p}^N$  as

$$U_{t_p}^N = \{e_k | l_{g_{kt_p}} > g_k^{t_{p+1}} \text{ and } k = 1, 2, \dots, n\}. \tag{6}$$

$U_{t_p}^N$  consists of the economies having less growth in the time period  $t_{p+1}$  than what is required to be on/above the regression line drawn for the time period  $t_p$ . Such economies may include some of the economies in  $U_{t_p}$  who are still under the regression line and some others who are not maintaining their growth in  $t_p$  in the next time period.

Upon finding the sets  $U_{t_p}$  and  $U_{t_p}^N$ , our next concern is to quantify the laggings of these economies to catch up with regression line. For the time period  $t_p$ , we calculate the value as

$$d_{kt_p} = g_k^{t_p} - l_{g_{kt_p}} \tag{7}$$

Clearly, the economies in  $U_{t_p}$  will have negative  $d_{kt_p}$  values while the  $d_{kt_p}$  values calculated for the economies in  $U_{t_p}^N \setminus U_{t_p}$  will be positive.

Similarly, we propose to follow the laggings of these economies in the time period  $t_{p+1}$  with respect to the regression line for  $t_p$  as

$$d_{kt_p}^N = g_k^{t_{p+1}} - l_{g_{kt_p}} \tag{8}$$

Note that all the economies in  $U_{t_p} \cup U_{t_p}^N$  will have negative  $d_{kt_p}^N$  values.

$d_{kt_p}$  quantifies the required *catch-up growth* for  $e_k$  to be on the regression line to maintain the  $\beta$ -convergence during  $t_p$  while  $d_{kt_p}^N$  provides with the *catch-up growth* that is still required in the next time period with respect to the same reference level.

Based on  $d_{kt_p}$  and  $d_{kt_p}^N$ , the proposed *catching-up*  $\beta$  ( $c\beta$ ) metric quantifies the advancement of the economy  $e_k$  made in the next time period as

$$c\beta_k^{t_p} = \begin{cases} d_{kt_p}^N - d_{kt_p} & \text{if } e_k \in U_{t_p} \cup U_{t_p}^N \\ \infty & \text{otherwise} \end{cases} \tag{6}$$

A positive value of  $c\beta_k^{t_p}$  indicates the advancement in growth of the economy while a negative value indicates worsening.

#### 4. Discussion

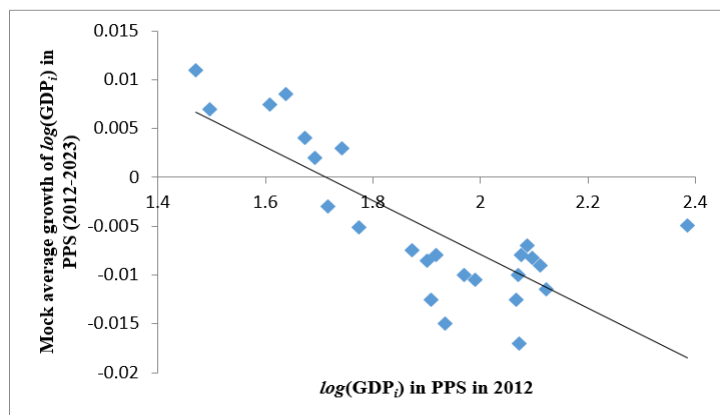
While  $\beta$ -convergence provides with an overall idea about the conditions of convergence of the economies under consideration, it does not clearly show the performances of the economies individually so that policy makers can rigorously analyze the economies to take monetary decisions in order to improve their situations. On the other hand, the proposed  $c\beta$  metric provides with the individual performances of the different economies under consideration. Hence, it has the potential to help the policy makers to take necessary steps to strengthen their productivity growths through revising the fiscal policies and structural set-ups to ensure more favorable conditions for making better utilizations of available resources in the economies.

Another interesting point about  $\beta$  (and also  $\sigma$ )-convergence is that it performs a relative measurement among the different economies. Such a convergence may not necessarily happen



as a result of economic developments. For the sake of analysis, let us suppose that each of the average growth rates of the countries during 2012-2023 is 0.01 less than what is reported in the Figure 1. This leads us to Figure 2. Interestingly, we get almost the same  $\beta$  value here as well. Thus for both the data in Figures 1 and 2,  $\beta$ -convergence reports the same convergence phenomenon though growth rates are much different. The  $c\beta$  values calculated in the two time periods will be negative for every country, indicating the unexpected decrease of the economic growth.

**Figure 2:  $\beta$ -convergence in Synthetic/Mock Data of EU 2012-2023; ( $\beta = -0.0272$ )**



Source: Data in  $x$ -axis are authors' calculation, and each of the data in  $y$ -axis are 0.01 less than what is reported in Figure 1.

For a sustainable convergence, the growths of the lower income economies are also required to be sustainable (ECB, 2015). In other words, a consistent long-term growth is necessary. However, the traditional  $\beta$ - and  $\sigma$ -convergences present the information of overall conditions of the economies. Since such calculations are done on the data at the start and end of a specific duration, they do not provide mechanisms to investigate the ups and downs that might happen in between. At this point, the duration can be divided into smaller time periods, and the  $c\beta$  values can be calculated at all these time periods. This will give much better insights about the actual growth of the economies.

## 5. Conclusion

We have proposed the  $c\beta$  metric as a supportive measure to enable detail analysis of performances of different economies. While the traditional  $\beta$ - and  $\sigma$ -convergences focuses on the overall relative growth of all the countries under consideration, the proposed metric shows a way to look into more detail of the growths of the countries' economies, analyze the trends of the growths and thereby take necessary actions.

In this paper, we have mainly focused on the theoretical concept of the proposed metric. We look forward to make a practical study using this metric to analyze the economies of the countries in EU in our next work. Again, we have put the principle focus on the economies falling under the regression line. However, the proposed  $c\beta$  metric can also be used to analyze the other comparatively *better-performing* economies as well. A way to perform comparative analyses may also be possible based on the  $c\beta$  values of different economies. We leave these here as our future endeavor.

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### **References**

- [1] Brada, J. C. and Kutun, A. M. (2001). The convergence of monetary policy between candidate countries and the European Union. *Economic Systems*, vol. 25, iss. 3, pp. 215–231.
- [2] Dvoroková, K. (2014). Sigma Versus Beta-convergence in EU28 in Financial Crisis and Postcrisis Period. *WSEAS Transactions on Business and Economics*, vol. 11, pp. 314-321.
- [3] Dvoroková, K., and Hodula, M. (2014). Modelling of Maastricht Convergence Criteria Influence on Economic Growth: an empirical study of Visegrad Group countries. *WSEAS Transactions on Business and Economics*, vol. 11, pp. 350 - 358.
- [4] European Central Bank (ECB). (2015). *Real Convergence in the Euro Area: Evidence, Theory and Policy Implications* [online]. ECB Economic Bulletin (5):30–45. Available at: [https://www.ecb.europa.eu/pub/pdf/other/eb201505\\_article01.en.pdf](https://www.ecb.europa.eu/pub/pdf/other/eb201505_article01.en.pdf).
- [5] Gomez, M. (2008). Convergence speed in the Ak endogenous growth model with habit formation. *Economics Letters*, vol. 100, iss. 1, pp. 16–21.
- [6] Haviernikova, K. (2014). Convergence of the Slovak Republic regions. In *Proceedings of the 2nd international conference on European integration*, Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 228-235.
- [7] Lucke, B. (2008). Sigma-convergence. *Economics Letters*. vol. 99, iss. 3, 2008, pp. 439–442.
- [8] Melecký, L. (2012). Evaluation of Cohesion in Visegrad Countries in Comparison with Germany and Austria by Multivariate Methods for Disparities Measurement. *International Journal of Mathematical Models and Methods in Applied Sciences*, vol. 6, iss. 8, 2012, pp. 979-989.
- [9] Pfaffermayr, M. (2009). Conditional beta- and sigma-convergence in space: a maximum likelihood approach. *Regional Science and Urban Economics*, vol. 39, iss. 1, pp.63–78.
- [10] Sala-I-Martin, X. (1996). The Classical Approach to Convergence Analysis. *The Economic Journal*. vol. 106, iss. 437, 1996, pp. 1019 - 1036.
- [11] Soukiazis, E. and Castro, V. (2005). How the Maastricht criteria and the stability and growth pact affected real convergence in the European Union: a panel data analysis. *Journal of Policy Modeling*, vol. 27, iss. 3, 2005, pp. 385–399.
- [12] Staničková, M. (2012). Assessment of Efficiency in Selected EU Member States by Data Envelopment Analysis Models. In *Proceedings of the 1st international conference on European integration*, Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 303 - 314.
- [13] Taylor, A. M. (1999). Sources of convergence in the late nineteenth century. *European Economic Review*, vol. 43, iss. 9, 1999, pp. 1621–1645.

# The EU Climate Policy and Its Impact on Market Value of Aviation Sector Companies

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## **Abstract**

*The negative consequences of the rapid passengers and cargo air transport development, such as climate change and the increase in air pollutants emissions, caused the tightening of the EU climate policy towards the aviation sector. One of the actions taken by the EU to reduce CO<sub>2</sub> emissions derived from commercial flights was the inclusion of aviation into the European Union Emission Trading Scheme (EU ETS). The paper presents the most important rules of the EU climate policy aimed at the CO<sub>2</sub> emissions reduction by aircraft operators, mainly related to their participation in the EU ETS. The changing EU climate policy is a source of uncertainty about future operating conditions for aviation sector companies, which may also affect investors' interest in this sector. Therefore, the Markov-switching multifactor model is used to assess the impact of the European Aviation Allowances prices' variability on the market value of chosen European aviation companies in the period 2012-2017.*

**Keywords:** aviation sector, CO<sub>2</sub> emissions, emissions trading, EU climate policy

**JEL Classification:** Q53, C50, Q58, R40

## **1. Introduction**

The dynamic development of passenger air transport in last decades constitutes a vital element of the ongoing globalization process, and also a factor that stimulates social and economic development (Mesjasz-Lech, 2016; Simarmata et al., 2017). According to the Airports Council International, passenger traffic will be increasing at the predicted growth rate of 4.9% per annum in 2015-2040. It is worth stressing that this growth rate will lead to double of global passenger traffic to over 14 billion by 2029 (ACI WATF 2016). The abovementioned statistics should be also analysed in the context of negative influence of air transport on the natural environment, in particular emission of toxic exhaust gases that are directly or indirectly a threat to human health. Air pollutants emission depends to a large extent on the aviation fuel quality and the process of its combustion in aircraft engines. For this reason, the EU policy stresses both a larger utilization of bio-fuels in the aviation sector as well as low-emission improvement of aircraft engines that is connected with lower fuel consumption while preserving the safety of aircraft construction (Skrodzka, 2016). In the years 1990-2005 a growth in the emission of CO<sub>2</sub> was recorded in the aviation sector from 88 to 156 million of tonnes, thus, in 2005 the emission of carbon dioxide coming from fuel combustion while carrying out flights grew by 77% compared to 1990 (European Aviation Environmental Report, 2016). In order to assess the radiative forcing from aviation, it is needed to evaluate the whole carbon cycle in the environment pointing at the long lifetime of CO<sub>2</sub> (100 - 1000 years), without focusing only on short-lived aviation emissions (Dessens et al., 2014). Taking all these into account large hopes related to limiting air pollutants emission and stopping the anthropogenic climate changes that

accompany them are placed on the introduced on a global scale regulations on CO<sub>2</sub> emission in the aviation sector. Small progress achieved by the International Civil Aviation Organization (ICAO) in developing a global market based measure was one of the reasons of taking by the EU unilateral actions on tightening the climate policy towards civil aviation. This resulted in inclusion of civil aviation into the European Emission Trading Scheme at the beginning of January 2012 (Preston and Hooper, 2012).

With this reference the paper presents the most important principles of the EU climate policy aimed at limiting the CO<sub>2</sub> emission generated by civil aviation, which are connected with the EU ETS functioning. Tightening the EU climate policy and legislative changes that followed it are a source of uncertainty for aircraft operators with regard to future conditions of conducting air operations within the territory of the European Economic Area. They can also contribute to a lower investor interest in this sector. For this reason, the goal of the paper is to evaluate the influence of the EU ETS on the market value of selected European airlines in the period from 2012 to 2017, which was characterized not only by the changes in the principles of aviation functioning in the EU system, but also finalizing the works of ICAO on the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). The Author has constructed the Markov-switching multifactor model with GARCH structure, on the basis of which the significance of CO<sub>2</sub> emission allowances market price impact on prices of shares of analysed airlines has been verified depending on the valid volatility regime. The identified volatility regimes have been compared to periods when changes to the EU climate policy and the EU ETS functioning were introduced, which concerned civil aviation.

## 2. The EU Policy of CO<sub>2</sub> Emission Reduction by Civil Aviation

Since 2012 aircraft operators performing flights within the territory of the European Economic Area have been obliged to monitor own CO<sub>2</sub> emission in each calendar year and account for it with the use of special emission allowances (the Directive of the European Parliament and of the Council 2008/101/WE). Aircraft operators may apply the following options while accounting for own CO<sub>2</sub> emission within the EU ETS scheme (Scheelhaase et al., 2018):

- covering the emission with allocated free of charge or purchased in the auctioning system European Union Aviation Allowances (EUAs), which are destined for the aviation sector exclusively;
- covering the emission with purchased on the secondary market European Union Allowances (EUAs), which are destined for other sectors included into the EU ETS;
- using permits from Kyoto-based „Clean Development Mechanism” (CERs) and “Joint Implementation” (ERUs) for up to 1.5 per cent of the number of allowances individually required for surrendering in a given year.

The most important principles concerning the size of the allowance pool destined for the aviation sector and principles of its allocation have been presented in Table 1.

The decision of the EU on including the aviation sector into the EU ETS has been widely discussed on the international fora, the most frequently mentioned issues have concerned additional cost imposed on aircraft operators from outside the EU. Environmental costs result from the necessity of annual monitoring, registering and accounting for own emission of greenhouse gases in the Union Registry, and thus aircraft operators have been burdened with administrative costs, cost of purchasing CO<sub>2</sub> emission allowances and introducing a system for managing them, and also costs that accompany new green investments in the aviation sector (Preston et al., 2012).

**Table 1: Allocation Principles of Aviation Allowances Pool in the Period 2012-2020**

Characteristics	Period of “learning how to function in the system”: 2012	Adequate period: 2013-2020
<b>„Cap” level</b>	It was set 3% below the mean average historical annual aviation emissions for the period of 2004 – 2006: 212 892 053 t of CO <sub>2</sub>	It was set 5% below the mean average historical annual aviation emissions for the period of 2004 – 2006: 208 502 526 t of CO <sub>2</sub> from 2013 onwards
<b>Allowances granted free of charge</b>	85%	82%
<b>Allowances to be sold in auctioning sales</b>	15%	15%
<b>Allowances moved to a special reserve</b>	-	2%

Source: own elaboration based on Preston et al. (2012), p. 51

With this reference, participants of the EU ETS scheme that represent civil aviation more and more often raised the issue of the distortion of the competitive equilibrium on the international and domestic flights market, which was the cause of starting the research concerning the impact of the EU ETS on the financial condition and competitiveness of airlines. It has been demonstrated, among others, that the influence of direct costs of participating in the EU ETS on the situation of Italian airline operators was limited. However, a growth of these costs importance has been forecast after 2016 due to the expected increase in CO<sub>2</sub> emission allowances price in the auctioning system, change of demand price elasticity and the possibility to pass on the majority of the costs related to participation in the EU ETS scheme on airline customers. Moreover, the compliance of the Directive 2008/101/WE with the Chicago Convention on International Civil Aviation (1944) was disputed on the international fora, where imposing additional financial burdens on air carriers from outside of the EU without prior consultations in this scope with all interested parties was questioned (Meleo et al., 2016). This resulted in intensified works of ICAO aimed at achieving an agreement concerning the construction and implementation of global market based measure (GMBM) to limit carbon dioxide emission in international aviation. The European Union’s reaction in this respect was suspending temporarily for the years 2013-2016 the implementation of the EU emission requirements for flights from and to airports located outside the European Economic Area. Additionally, flights between airports located in the EEA and most remote areas within the EEA were excluded from the scheme (Decision 2013/337/EU; Regulation 421/2014). Lack of progress in the works of ICAO would result in no changes introduced into the directive with regard to EU ETS, and this in turn would mean restoration of the EU ETS scheme full application since the beginning of 2017.

All these actions were summarized by concluding an agreement in Montreal (2016) that concerned implementation by governments of particular countries the Carbon Offset and Reduction Scheme for International Aviation (CORSIA). This measure is supposed to facilitate achievement of the goal, which is stabilizing the international aviation emission at the level from the year 2020 through the use of carbon offset scheme worldwide since 2021.

Continuing the support for IACO's actions to implement the global market based measure the EU decided to prolong for the whole of the 2017 the operation of derogation mechanism with respect to flights to and from airports outside of the EEA, according to the Regulation No 421/2014. Preparing itself to implement since 2021 the CORSIA scheme and having regard to the fact of controlling the CO<sub>2</sub> emission coming from flights between airports located within the EEA, the EU decided to prolong until 31 December 2023 functioning of aircraft operators in the EU ETS scheme under the current rules. Prolonging the operation of the derogation mechanism is also connected with proportional decrease in the amount of allowances destined to be sold at auctions and issued free of charge, including a special reserve, in order to avoid an occurrence of emission allowances oversupply on the secondary market. Moreover, since 2021 the pool of aviation allowances granted to aircraft operators will be decreasing annually according to a linear reduction coefficient, which is used in other sectors covered by the EU ETS scheme (Regulation of the European Parliament and of the Council 2392/2017).

### 3. Markov-Switching Multifactor Model with GARCH Structure

The calibration of the multifactor model proposed by Oberndorfer (2009) has been conducted, which consisted in rejecting the assumption that structural parameters are fixed values. A multifactor model with variable parameters that are generated by a random process allows for describing a non-linear nature of dependencies between market price of CO<sub>2</sub> emission allowances and value of European airlines shares. In particular this class of models allows to verify whether the increased volatility periods of airlines share prices correspond to the periods of introducing changes to the EU climate policy and periods of finalizing the works of ICAO on introducing the global market based measure. The following form of Markov-switching multifactor model with GARCH structure was estimated (Oberndorfer, 2009; Doornik, 2013):

$$r_t = \psi_0(s_t) + \psi_1(s_t)r_{m,t} + \psi_2(s_t)r_{CO,t} + \psi_3(s_t)r_{fuel,t} + \sum_{i=1}^p \varphi_i(s_t)r_{t-i} + \varepsilon_t \quad (1)$$

$$\varepsilon_t = \sigma_t(s_t) \cdot \xi_t \quad (2)$$

$$\sigma_t^2(s_t) = \omega(s_t) + \alpha_1(s_t)\varepsilon_{t-1}^2 + \beta_1(s_t)\sigma_{t-1}^2 \quad (3)$$

$$\xi_t | \Omega_{t-1} \sim N(0,1) \quad (4)$$

where:  $r_t$  – airline shares return in the period  $t$ ,  $r_{m,t}$  – market portfolio return,  $r_{CO,t}$  – percentage change of CO<sub>2</sub> emission allowances price,  $r_{fuel,t}$  – percentage change of crude oil price,  $\Omega_{t-1}$  – set of available information up to the moment  $t-1$ ,  $\psi_\kappa(s_t)$  ( $\kappa = 0, \dots, 3$ ) and  $\varphi_i(s_t)$  ( $i = 1, \dots, p$ ) – parameters dependent on the regime, autoregression order  $p$  determined on the basis of Akaike's Information Criterion (AIC),  $\varepsilon_t$  – random coefficient,  $\sigma_t(s_t)$  – conditional standard deviation of random coefficient dependent on regime,  $\alpha_1(s_t)$  – dependent on the regime ARCH structure parameter indicating the impact of information flowing to the market on volatility of airline shares price volatility,  $\beta_1(s_t)$  – dependent on the regime GARCH structure parameter proving the persistence of volatility process of airline shares price,  $\xi_t$  – independent random variables of standardized normal distribution.

The  $\psi_1(s_t)$  parameter shows the reaction of airline shares to changes of market portfolio,  $\psi_2(s_t)$  parameter is a measure of airline shares sensitivity to changes of CO<sub>2</sub> emission allowances, while the parameter  $\psi_3(s_t)$  indicates the reaction of airlines to changes of crude oil prices in particular regimes.

The changes of airline shares prices volatility regimes are controlled by a non-observable random variable  $s_t$ , which most frequently is a homogeneous Markov chain of transition probability matrix  $P$  (Hamilton, 1994):

$$P = \left[ p_{ij} \right]_{i,j \in \{0,1,\dots,N-1\}}, \quad (5)$$

the elements of which determine the process transition probability from the state  $j$  at the moment  $t-1$  to state  $i$  at the moment  $t$ .

Moreover, the elements of  $P$  matrix comply with the following conditions (Hamilton, 1994):

- Markov property

$$p_{ij} = P(s_t = i | s_{t-1} = j, s_{t-2} = i_{t-2}, \dots, s_1 = i_1) = P(s_t = i | s_{t-1} = j) \quad (6)$$

- conditions that guarantee the stochastic structure of  $P$  matrix

$$p_{ij} \geq 0 \quad \text{and} \quad \sum_{i=0}^{N-1} p_{ij} = 1 \quad \text{for } i, j = 0, 1, \dots, N-1. \quad (7)$$

Parameters of Markov-switching multifactor model with GARCH structure are estimated with the maximum likelihood method, in which the logarithm of likelihood function is maximized in the form (Doornik, 2013):

$$\ell(\theta) = \sum_{t=1}^T \ln \left[ \sum_{j=0}^{N-1} f(r_t | s_t = j, x_t, \Omega_{t-1}; \theta) \cdot P(s_t = j | \Omega_{t-1}; \theta) \right] \quad (8)$$

where:  $\theta$  – vector of estimated parameters.

The Feasible Sequential Quadratic Programming algorithm was used in the estimation process, with an additional option of searching for the global maximum of the likelihood function after one of the local maxima had been found. An additional estimation product is the smoothed probabilities sequence  $P(s_t = j | \Omega_t)$  ( $t = 1, 2, \dots, T$  and  $j = 0, 1, \dots, N-1$ ), which allow to assign each observation  $r_t$  to one of the volatility regimes.

#### 4. Assessment of the EU Climate Policy Impact on Airlines Shares Prices Based on Markov-Switching Model

In this paper the short-term relations occurring between the share prices of three large European airlines groups, namely Lufthansa Group, International Airlines Group (IAG), Air-France KLM and CO<sub>2</sub> emission allowances prices are analysed in the period from 04.03.2012 to 31.12.2017 (daily data). The choice of the research period is connected with the inclusion aviation into the EU ETS and introduction into trade the EUAA futures contracts by the Intercontinental Exchange Futures Europe in London (ICE Futures Europe) in February 2012. In order to obtain a benchmark series for both EUAA and EUA prices (EUR/tCO<sub>2</sub>e), the December futures contracts listed on the ICE Futures Europe are rolled over according to the "Delivery-day" criterion (Carchano et al., 2014). Two additional control variable (market portfolio and fuel prices) are included into this analysis in order to explain the influence of the "business climate" of given stock exchange and crude oil prices on the market value of aviation companies' shares. Market portfolio is described respectively by DAX, FTSE100, CAC40 indices, while fuel prices are represented by Brent crude oil prices (USD per barrel). In case of Lufthansa and Air France models, Brent crude oil prices are converted from US dollars to Euros using the USD-EUR exchange rate. In order to make the comparison between the IAG

price volatility and carbon permits, crude oil and market portfolio volatility, Brent crude oil prices and both the EUAA and the EUA prices are denominated in British pounds using the USD-GBP and EUR-GBP exchange rates. The data was retrieved from Stooq Financial Service (exchange rates, shares prices, stock exchange indices), the Energy Information Administration (Brent crude oil process) and Quandl database (EUAA and EUA futures prices). The analysis is performed on log returns of the prices and its preliminary stage concerns the verification of dynamic properties (stationarity, structural break occurrence, autocorrelation and volatility clustering effect) of each financial return series. The results of conducted diagnostic tests justify the use of Markov-switching multifactor model with GARCH structure (1)- (4) in the further analysis. Due to the presence of serial correlation in some return series the autocorrelation order is set up to four and number of possible volatility regimes is determined as two or three. Estimation results for the best models are presented in Table 2.

**Table 2: Estimation Results of the Markov-Switching Multifactor Models with GARCH(1,1) Structure for Chosen Airlines**

Parameter/Statistic	AIR FRANCE	IAG	LUFTHANSA
Constant (0)	-0.0029 [0.960]	-0.2691 [0.456]	-0.0041 [0.874]
Constant (1)	0.2184 [0.358]	0.1516 [0.005]	0.0487 [0.214]
Market Portfolio (0)	1.0494 [0.000]	-0.0522 [0.861]	1.1833 [0.000]
Market Portfolio (1)	0.8801 [0.000]	0.0885 [0.046]	0.8952 [0.000]
EUAA/EUA (0)	-0.0221 [0.738]	-0.0227 [0.832]	-0.0019 [0.973]
EUAA/EUA (1)	0.0177 [0.276]	0.0130 [0.442]	0.0062 [0.616]
Brent Crude Oil (0)	-0.0980 [0.428]	-0.0523 [0.099]	-0.0269 [0.543]
Brent Crude Oil (1)	-0.1154 [0.000]	-0.0863 [0.018]	-0.0668 [0.003]
sigma (0)	1.1261 (0.280)	1.1590 (0.327)	0.4062 (0.089)
sigma (1)	0.3374 (0.126)	0.5144 (0.118)	0.0755 (0.062)
ARCH-1	0.0331 (0.012)	0.0405 (0.023)	0.0088 (0.003)
GARCH-1	0.8892 (0.049)	0.8592 (0.045)	0.9783 (0.008)
Unconditional variance (0)	14.4929	11.5553	31.4884
Unconditional variance (1)	4.3423	5.1286	5.8527
$\rho_{11}$	0.2573	0.6745	0.1174
$\rho_{22}$	0.7881	0.9573	0.8225
LR test	170.28 [0.000]	123.66 [0.000]	208.56 [0.000]
J-B test	16.538 [0.000]	5.942 [0.051]	27.770 [0.000]
B-P(5) test	3.457 [0.630]	4.842 [0.478]	2.647 [0.754]
ARCH(2) test	0.813 [0.444]	1.896 [0.151]	0.507 [0.603]

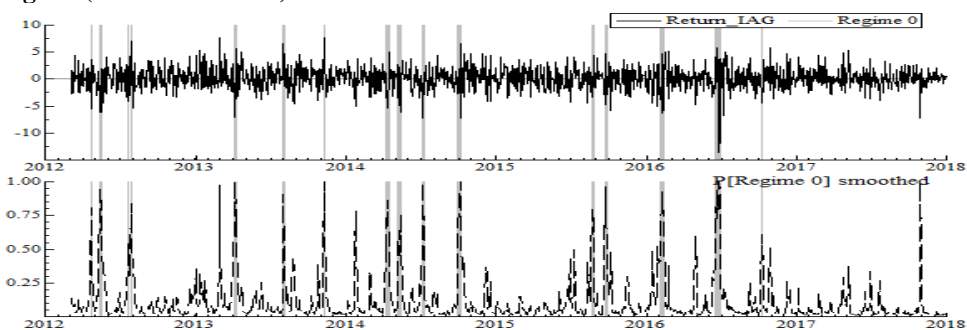
Note: standard error for coefficient in parenthesis, p-value in brackets, LR – likelihood ratio test for non-linearity, J-B - Jarque-Bera test for normality, B-P (k) - Box-Pierce test of serial correlation up to order k, ARCH(q) – Engle’s ARCH test for heteroscedasticity up to lag q.  
Source: own calculations.



Two regimes were distinguished in the course of modelling: the regime of normal volatility of airlines share prices (regime 1) and high volatility one (regime 0). In case of Air France and Lufthansa shares, one can notice that coefficients that illustrate the influence of capital market risk are statistically significant at 0.05 in each regime. In normal volatility regime all airlines' shares are defensive in relation to their market portfolio, which means that when the values of the CAC40, FTSE100 and DAX portfolios grow by 1% *ceteris paribus*, then the value of airlines shares will grow on average respectively by 0.8801% (Air France), 0.0885% (IAG) and 0.8952% (Lufthansa). In the high volatility regime in turn the drop of the CAC40 and DAX indices by 1% may contribute to the decrease in airlines' market capitalization on average respectively by 1.0494% (Air France) and by 1.1833% (Lufthansa). In the periods characterized by high volatility of airline share prices (regime 0), the direction of the influence of EUAs price changes on the returns of Air France, IAG and Lufthansa is negative, but statistically insignificant. It is worth stressing that the impact of changes of aviation allowances prices on three airlines group is statistically insignificant in each regime. This can be the result of low share of auctioned allowances in total allocated permits intended for covering of emissions from aviation activities (only 15%) and the possibility of environmental cost passing through to the passenger, as well as, the relatively loose reduction target referring to the international aviation. Moreover, the increase in crude oil prices significantly influences on the decrease in airlines share prices in normal volatility regime, but the reaction of airlines share prices on this factor is weaker compared to the reaction on changes in market portfolio values on the stock exchange. While comparing the unconditional variance in regime 0 to unconditional variance in regime 1, it can be observed that in case of IAG this ratio is the smallest, and for Lufthansa is the biggest as it is amount to more than five. Evaluating the estimated values of transition probabilities between regimes 0 and 1 it can be observed that the normal volatility regimes are stable in case of each airline. In turn, the high volatility regimes for Air France and Lufthansa are temporary regimes, which means that there is a great chance (respectively 0.7427 and 0.8826) that in the next period high volatility regime will be replaced by the normal one. Only single returns, which indicate at extreme changes of Air France or Lufthansa prices, have been assigned to high volatility regime. Therefore, this regime may be treated as "spiky" regime connected with the structural changes on analyzed markets or in the airline activities. It is worth stressing that for all Markov-switching multifactor models with GARCH structure, the Davies (1987) upperbound for the p-value of the LR test of linearity strongly rejects the linear model (Doornik, 2013).

On the basis of obtained in the estimation procedure values of smoothed probabilities the moment of process switching between particular volatility regimes were estimated (Fig. 1).

**Figure 1: IAG Returns (the Upper Panel), Smoothed Probabilities of High Volatility Regime (the Lower Panel)**



Source: own elaboration

Following Fan et al. (2017), the list of events concerning the EU climate policy adjustment towards the incorporation of aviation activities into the EU ETS and reduction the scope of emissions covering the international aviation activities is prepared (Table 3).

**Table 3: Regulatory EU Climate Policy Events Referring to International Aviation and its Covering by Periods of High Volatility Airlines' Prices**

Date	Event description	Assigned to high volatility regime		
		Air France	IAG	Lufthansa
2012-06-21	Regulation 601/2012 on the monitoring, reporting and verification of GHG emissions	2012-06-20 - 2012-06-21 (0.889)	-	2012-06-19 (0.790)
2013-01-29	Regulation 109/2013 specifying the administering States for aircraft operator	2013-02-04 (0.906)	2013-02-28 (0.977)	2013-02-06 (0.931)
2013-04-16	The European Parliament voted against the Commission's back-loading proposal	2013-04-05 (0.999) 2013-04-10 (0.682)	2013-04-04 - 2013-04-10 (0.855)	2013-04-16 (0.821)
2013-04-24	Publication of the "stop the clock" decision (Decision 377/2013)	2013-04-23 (0.861)	2013-04-23 (0.837)	2013-04-23 (0.789)
2013-05-02	Regulation 389/2013 establishing a Union Registry	2013-05-02 - 2013-05-06 (0.756)	-	2013-05-02 (0.781)
2013-05-21	Regulation 525/2013 on a mechanism for monitoring and reporting GHG emissions	2013-05-20 (0.617)	-	2013-05-20 (0.862)
2013-10-16	Commission proposed applying the EU ETS to European regional airspace from 1 January 2014	2013-10-23 (0.787)	2013-10-25 (0.861)	2013-10-17 (0.839)
2014-02-07	Back-loading: 2014 auction volume reduced by 400 million allowances	2014-02-26 (0.868)	2014-02-28 - 2014-03-04 (0.792)	-
2014-04-16	Regulation 421/2014 referring to the derogations in international aviation till the implementation of GMBM	2014-04-14 (0.765)	2014-04-10 - 2014-04-16 (0.855)	2014-04-14 (0.817)
2016-05-18	Decision 775/2016 on the benchmark to allocate GHG allowances free of charge	2016-05-20 (0.656)	2016-05-19 (0.615)	2016-05-03 (0.947)
2016-05-30	Council Decision 915/2016 upholding the reduced scope for coverage of emissions	2016-06-06 (0.998)	-	2016-06-06 (0.734)
2016-10-06	Agreement on implementation CORSIA scheme	2016-10-11 (0.702)	2016-10-06 - 2016-10-07 (0.706)	2016-10-11 (0.962)
2017-02-03	Commission's Proposal to continue current limitations of scope for aviation activities	2017-02-08 (0.978)	-	2017-02-08 (0.789)
2017-12-13	Regulation 2392/2017 continuing the reduced scope referring to GHG emissions	-	-	2017-12-08 (0.966)

Note: smoothed probability assigning return to the high volatility regime in parentheses.

Source: own elaboration based on Official Journal of the European Union and Fan et al. (2017), p. 148

Next, the periods of high volatility identified on the basis of Markov switching model for each airline are compared to these regulatory policy adjustments events. Such approach enables to assessment whether the changes in the EU climate policy rules affected the volatility of market prices of chosen airlines.

The common periods assigned to the spiky volatility regime correspond with such events as:

- updating on both the benchmark to allocate carbon dioxide allowances free of charge and the aviation corporation list. These events determined the aviation cap and the coverage scope of the aviation trading system, as well as the possibility of the use another units in the covering emissions derived from international aviation;
- rejecting by the European Parliament in April 2013 the decision on back-loading, the aim of which was to partially solve the problem of surpluses of CO<sub>2</sub> emission allowances in the third stage of the EU ETS functioning. It had also a negative influence on aviation allowances prices;
- publishing both the decision of the European Parliament and Council on implementing the „stop the clock” mechanism and the Regulation 421/2014 on further derogation in aviation, that pointed to the continuation of the EU "Reduced Scope" regime. It was significant signal that the EU would track the progress in the ICAO work over the construction of the global market based measure;
- taking discussions on the further regulations referring to the narrowing the capped aviation activities within the European Economic Area (e.g. Commission's proposal concerning the applying the EU ETS to European regional airspace);
- conclusion of an global agreement regarding implementation of the Carbon Offset and Reduction Scheme for International Aviation and the continuation of the "Reduced scope" regime of the EU ETS in the EU climate policy.

These results are in line with the assessment of the impact of regulatory policy adjustments events on aircrafts operators activities made by Fan et al. (2017). Moreover, the implementation of the „stop the clock” mechanism caused the postponing the deadline to settle the emission from aviation operations within the EU ETS for 2013 and 2014, delayed the launch of aviation allowances trading in the auctioning system, what increased uncertainty of aircraft operators about the future development conditions. Therefore, the end of April in two subsequent years, being the deadline for each aircraft operator to settle own CO<sub>2</sub> emission for the previous years with the use of accumulated emission allowances, were also assigned to high volatility regime on the basis of Markov-switching multifactor models.

## 5. Conclusion

The paper pertains to the issue of the tightening of the EU climate policy rules referring to civil aviation sector under the expectation on the concluding the agreement concerning the construction and implementation of the global market based measure to limit carbon dioxide emission in international aviation by the ICAO. The analysis covers period from the inclusion of civil aviation into the EU ETS (2012) to publishing the official EU position on the continuation of current limitations of scope for aviation activities and preparing the implementation of the CORSIA scheme. Maintaining a limited scope of EU ETS application after the year 2016 was supposed to be a stimulus for further works on the international fora to develop detailed description of the CORSIA system. The above stance of the EU was also supported by scientific research that shows that best results in the scope of reducing the CO<sub>2</sub> emission generated by civil aviation would be possible to achieve if the two market based

measures operated simultaneously. This means maintaining the obligation to account for flights within the European Economic Area after the year 2020 within the EU ETS scheme and a simultaneous application of the CORSIA system with regard to flights into and from the EEA (Scheelhaase et al., 2018).

Decisions concerning tightening the EU climate policy in the scope of greenhouse gases emission while performing international aviation operations and modifying the principles of the EU ETS functioning will affect competitiveness of aircraft operators performing flights within the European Economic Area in the years 2012-2017 and may also contribute to a lower investor interest in this sector. In particular, market capitalization value of airlines companies may be sensitive on the market price of both EUAAs and EUAs, as well as the rapid changes in the carbon dioxide emission permits prices observed in the secondary market. The EUAA or EUA futures contracts have been designed in order to hedge aircraft operators against the unfavourable and rapid changes in the allowances prices. Therefore, Markov switching multifactor model with GARCH structure was estimated for three big airlines companies in order to evaluate the impact of changes in the CO<sub>2</sub> emission allowances prices on market capitalization of airlines across different volatility regimes. It was found that the impact of changes of aviation allowances prices on three airlines group was statistically insignificant in each regime. Moreover, common for all airlines extremely high volatility periods, which indicated at the increase in market risk associated with the airlines shares' investment and might decrease the market capitalization of given airline, were generated by the important changes in the EU climate law, especially concerning the reform of the EU ETS system.

## References

- [1] Airport Council International (2016). *World Airport Traffic Forecasts 2016-2040* [online]. [cit.2018-02-26]. Available at: <http://www.aci.aero/News/Releases/Most-Recent/2016/09/26/ACI-has-released-the-World-Airport-Traffic-Forecasts-20162040-marking-the-beginning-of-the-ACINAWorld-Annual-General-Assembly-Conference-and-Exhibition>.
- [2] Carchano, Ó., Medina V. and Pardo A. (2014). Assessing Rollover Criteria for EUAs and CERs. *International Journal of Economics and Financial Issues*, Vol. 4, No. 3, pp. 669-676.
- [3] Commission of the European Union (2013). Decision No 377/2013/EU of the European Parliament and of the Council of 24 April 2013 derogating temporarily from Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowances trading within the Community [online]. [cit.2018-02-26]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32013D0377>.
- [4] Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council [online]. [cit.2018-03-05]. Available at: <http://eur-lex.europa.eu/eli/reg/2012/601/oj>.
- [5] Dessens, O., Köhler, M.O., Rogers, H.L., Jones, R.L. and Pyle, J.A. (2014). Aviation and climate change. *Transport Policy*, vol. 34, pp. 14-20.
- [6] Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community [online]. [cit.2018-03-02]. Available at: <http://eur-lex.europa.eu/eli/dir/2008/101/oj>.

- [7] Doornik, J.A. (2013). *Econometric Analysis with Markov-Switching Models*. London: Timberlake Consultants Ltd.
- [8] *European Aviation Environmental Report* (2016) [online]. [cit.2018-02-26]. Available at: <https://ec.europa.eu/transport/sites/transport/files/european-aviation-environmental-report-2016-72dpi.pdf>.
- [9] Fan, Y., Jia, J.-J., Wang, X. and Xu, J.-H. (2017). What policy adjustments in the EU ETS truly affected the carbon prices? *Energy Policy*, vol. 103, pp. 145-164.
- [10] Hamilton, J.D. (1994). *Time Series Analysis*. New Jersey: Princeton University Press.
- [11] Meleo, L., Nava, C.R. and Pozzi, C. (2016). Aviation and the costs of the European Trading Scheme: The case of Italy. *Energy Policy*, vol. 88, pp. 138-147.
- [12] Mesjasz-Lech, A. (2016). Directions of changes in the sustainable development of transport in Poland in the context of European integration. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 623–630.
- [13] Oberndorfer, U. (2009). EU emission allowances and the stock market: evidence from the electricity industry. *Ecological Economics*, vol. 68, pp. 1116-1129.
- [14] Preston, H., Lee, D. S. and Hooper, P.D. (2012). The inclusion of the aviation sector within the European Union's Emissions Trading Scheme: What are the prospects for a more sustainable aviation industry? *Environmental Development*, vol. 2, pp. 48-56.
- [15] Regulation (EU) 2017/2392 of the European Parliament and of the Council of 13 December 2017 amending Directive 2003/87/EC to continue current limitations of scope for aviation activities and to prepare to implement a global market-based measure from 2021 [online]. [cit.2018-03-05]. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R2392&from=PL>.
- [16] Regulation (EU) No 421/2014 of the European Parliament and of the Council of 16 April 2014 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in view of the implementation by 2020 of an international agreement applying a single global market-based measure to international aviation emissions [online]. [cit.2018-03-02]. Available at: <http://eur-lex.europa.eu/eli/reg/2014/421/oj>.
- [17] Scheelhaase, J., Maertens, S., Grimme, W. and Jung, M. (2018). EU ETS versus CORSIA – A critical assessment of two approaches to limit air transport's CO<sub>2</sub> emissions by market-based measures. *Journal of Air Transport Management*, vol. 67, pp. 55-62.
- [18] Simarmata, J., Keke, Y., Veronica, Silalahi, S.A. and Benková, E. (2017). How to establish customer trust and retention in a highly competitive airlines business. *Polish Journal of Management Studies*, vol. 16, No.1, pp. 202-214.
- [19] Skrodzka, W. (2016). Analysis of the structure of primary energy production in Poland against the European Union. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 867–874.

## The Economic Consequences of Divorce as a Challenge for European Integration

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### **Abstract**

*The European Union aims to maintain and develop an area of freedom, security and justice in which the free movement of persons is ensured. The increasing European integration and the growing mobility in the internal market inevitably result in an increase in the cross-border relationships, including international marriage and divorce. In this respect, divorce has not only personal, but also significant economic effects (i.e. effects on matrimonial property). Nevertheless, legal regulation varies throughout the EU Member States, which provides for uncertainty for the spouses. Moreover, this may lead to disadvantageous implications for the rights of third parties (especially creditors). In 2016, the EU adopted regulation to eliminate the obstacles to the free movement of persons, in particular the difficulties experienced by the international couples in dividing their property upon divorce. The aim of this paper is to analyse whether the newly adopted EU instrument provides for the effective and predictable solution of the economic consequences of divorce.*

**Keywords:** *cross-border relationships, economic consequences of divorce, EU regulation, free movement of persons, matrimonial property regimes*

**JEL Classification:** *K30, K33, K36*

### **1. Introduction**

“Freedom of movement of Union citizens is certainly one of the most successful achievements of European integration” (Maslowski, 2016, p. 594). Firstly, the free movement of economically active persons (workers, self-employed persons, and entrepreneurs) was covered. Afterwards, with the introduction of citizenship of the European Union (“EU”), the right of persons to move and reside freely within the territory of the EU Member States was extended to students, retired and other economically non-active persons as well (European Parliament [online], 2018; Sopková, 2004, pp. 328–329; more to the legal basis see Art. 3 para. 2 of the Treaty on European Union (“TEU”); Art. 21, Arts. 45 et seq., Arts. 67 et seq. of the Treaty on the Functioning of the European Union (“TFEU”).

The rise in mobility of persons within the European Union inevitably results in an increase in the cross-border legal relationships, in which the law of more than one EU Member State may apply (Van Erp, 2010, p. 6). The EU citizens are allowed to move freely across national borders to work, study or start a family in another Member State. It means that not only international commercial transactions, but also cross-border family relations become more and more common within the European single market. Consequently, there is a need for adoption of the appropriate legal instruments designed to handle the cross-border legal relationships and disputes (similarly Rozehnalová, 2013, pp. 17–18).

Accordingly, the number of international couples or couples having an international (cross-border) dimension is growing (European Commission [online], 2017). In 2015, marriages where at least one of the spouses was of different nationality to the country in which they reside accounted for 10.5 % of all marriages in the EU (Eurostat, People [online], 2018). In this paper, however, we are not only focusing on the spouses of different nationalities, but also couples living in an EU Member State other than that of their nationality, and couples who acquire property in more than one Member State (Viarengo, 2011, p. 200) (hereinafter referred to as “international couple” or “international marriage”).

Besides, we are also witnessing a rise in divorce rates as high number of marriages end in divorce. In this situation, the effects of divorce of marriage are of considerable importance (Siehr, 2012, p. 684). It should be emphasised that divorce may not only have an enormous impact on personal lives of the spouses, but also on their property relations – both between the spouses and in their relations with third parties, especially creditors (similarly Dvořák and Spáčil, 2011, p. 2). One of the most important economic consequences is the dissolution of matrimonial property, which is closely linked to the particular matrimonial property regime (Martiny, 2012, pp. 493, 495; see also Ribot, 2011, pp. 71–86).

Nevertheless, the rules governing the economic effects of divorce differ significantly in particular EU Member States. Because of this, the international couples face the practical and legal difficulties in case of property division upon divorce (European Commission, Proposal for a regulation [online], 2016, p. 4). *“The great variety of solutions adopted by each Member State creates a situation of uncertainty for spouses who may find themselves subject to different matrimonial property regimes, which depend on the court having jurisdiction. Moreover, this may lead to disadvantageous consequences for the rights of third parties, as well as the effective exercise of the right of free movement of persons”* (Viarengo, 2011, p. 200). It might therefore be difficult for the international couples to foresee, which rules will apply to their property relations, and what the economic consequences of the divorce will be.

After many years of preparations, negotiations and searching for political consensus, the Council regulation 2016/1103 implementing enhanced cooperation in the area of jurisdiction, applicable law and the recognition and enforcement of decisions in matters of matrimonial property regimes (“Regulation”) was enacted in June 2016. The Regulation seeks to eliminate the obstacles to the free movement of persons, especially the difficulties experienced by the international couples in dividing their property upon divorce (Recital 8 of the Preamble to the Regulation).

It follows that the current social and legal reality regarding the distribution of matrimonial property of the international couples upon divorce represents a great challenge for the ongoing European integration. The aim of this paper is to analyse whether the newly adopted EU instrument provides for the effective and predictable solution of the economic effects of divorce. With regard to the limited extent of this contribution, the author will only examine the background and adoption of the Regulation from the point of view of the determination of the law applicable to matrimonial property regimes. It will not deal with the matters of jurisdiction, and recognition and enforcement of judgments, which are beyond the scope of this paper. In the concluding part of this article the author will summarize her findings and provide a brief assessment. In order to achieve the purpose of this paper, the author will in particular use the descriptive method, and the methods of analysis and synthesis.

## **2. General Background and Possible Solutions**

Even the internal market might be considered an area without the factual internal frontiers, the legal barriers persist in particular matters (Týč, 2017, p. 242). This is also true in matters of

matrimonial property regimes, because substantive law differs substantially among the EU Member States. While most continental legal systems make use of the regimes of community of property, the common law countries prefer a separation of property (Scoles, 1989, pp. 17–18). Each state therefore subjects the spouses to a specific set of rules, which governs their financial relations (Scherpe, 2012, p. 1). Besides, divergence exists with regard to the conflict-of-law rules; some states determine the law applicable to matrimonial property regimes of the international couples according to the connecting factor of nationality of the spouses, others use domicile of the spouses. Lately, the concept of habitual residence has become utilized as well (Scoles, 1989, pp. 23–24; see also Kroll, 2008, pp. 380–383).

The abovementioned disparities are caused by the fact that family law including matrimonial property law is based on different national, historical, legal, and cultural traditions and background in each particular state (Dvořák and Spáčil, 2011, p. 6). Over the last few decades the EU has adopted several legislative instruments in order to help the EU citizens with the cross-border disputes (Marcos, 2013, pp. 96–109); including the regulation on the law applicable to divorce and legal separation (“Rome III regulation”) (Viarengo, 2014, pp. 547–559). Nevertheless, none of them is applicable to the economic effects of divorce (Viarengo, 2011, p. 200). Those remain subject to national law (Kroll, 2008, p. 380).

In order to demonstrate persisting problems, we can give an example. The spouses, the Czech nationals, have been living and working in Austria for several years. Besides, they own immovable property (for example house) in Germany. The spouses decided to file a divorce petition in a court of an EU Member State, which we presume to have jurisdiction in this particular case. The spouses also want this court to distribute their matrimonial property upon divorce. Hypothetically (depending on the used connecting factor), the rules of three EU Member States may be applicable. Provided other requirements are fulfilled, it can be the Czech, Austrian or German law. Accordingly, three different matrimonial property regimes might be at stake. In compliance with the Czech substantive law, the limited community of property (community of acquests) will be divided upon divorce. In conformity with Austrian law, a separation of property will be utilized. If German law is applicable, the regime of community of accrued gains will be liquidated. In any case, the extent of the property to be granted to each spouse (i. e. spouse’s share in property) upon divorce will more or less vary according to the applicable legal system (see also Pintens, 2011, pp. 20–36, 41–44).

There is no doubt that the absence of uniformity in the area of family law “*creates as obstacle to the free movement of persons and the creation of a truly European identity and an integrated European space*” (Boele-Woelki, 2005, p. 161). Because, the existing differences may prevent the international spouses from moving among the EU Member States, if they worry it might affect their matrimonial property rights (similarly Baarsma, 2011, pp. 3, 96). Theoretically, the outlined problems can be resolved in two ways. Firstly, harmonization or unification of the substantive law rules governing the economic consequences of marriage and divorce is possible. According to the second approach, the unified conflict-of-law rules (i. e. common rules determining the applicable law) in matters of matrimonial property regimes can be adopted at EU level (similarly Van Erp, 2010, p. 6). Even though, the unification of the substantive law rules would be more effective, the unification of the conflict-of-law rules is more realistic in the current state of development. Moreover, the conflict-of-law method provides for respect for the existing diversity in the national legal systems (Rozehnalová, 2013, p. 19).

Additionally, we have to consider whether the EU has competence to legislate in this sphere of law. Because there is no provision transferring competence to the EU in matters of domestic family law, it is clear that substantive matrimonial property law falls within the exclusive



competence of particular EU Member States (Art. 3 of the TFEU *a contrario*). Nevertheless, shared competence between the EU and the Member States exists as regards the area of freedom, security and justice, which also covers the judicial cooperation in civil (including family) matters having cross-border implications (Art. 4 para. 2(j), Art. 67 para. 4, Art. 81 of the TFEU; Fiorini, 2012, pp. 5, 8).

Without going into many details, we can summarize that the only possibility the EU legislator had was to adopt regulation and unify the conflict-of-law rules in matters of matrimonial property regimes. The conflict-of-law rules do not provide for substantive regulation; they only determine the national law of which state is best placed to govern the legal relationship in question.

### 3. Adoption of Regulation and Enhanced Cooperation

As a rule, the process of adoption of measures concerning family law having the cross-border implications is much slower than in other civil and commercial matters (Fiorini, 2012, pp. 6, 12). The reason is that they have to be enacted in accordance with a special legislative procedure, i.e. unanimously by the Council of the European Union after consulting European Parliament (Art. 81 para. 3 of the TFEU). But, the sensitivity of family law matters makes it uneasy to obtain consensus (Kuipers, 2012, p. 213). Similarly, the EU Member States failed to reach unanimity necessary for the adoption of the proposal for the regulation in matters of matrimonial property regimes, because Poland and Hungary raised their objections. Afterwards, the Council concluded that “*the objectives of cooperation in this area could not be attained within a reasonable period by the Union as a whole*” (Recital 10 of the Preamble to the Regulation).

Nevertheless, 18 EU Member States declared their intention to establish so called enhanced cooperation between themselves in matters of matrimonial property regimes of the international couples (Recital 11 of the Preamble to the Regulation; more to enhanced cooperation see Art. 20 of the TEU; Arts. 326–334 of the TFEU). Enhanced cooperation is a mechanism that allows establishing advanced cooperation of a group of EU Member States. These states are permitted to move at different speeds and towards different goals than those Member States, which decide to stay outside enhanced cooperation. Enhanced cooperation can only be undertaken as a last resort, where the EU as a whole is unable to achieve purpose of this cooperation within a reasonable time. At least nine Member States must participate in it. In addition, other prescribed conditions have to be fulfilled (Týč, 2017, p. 58).

On 9 June 2016, the Council enacted decision authorising enhanced cooperation in matters of matrimonial property regimes. The Regulation itself implementing enhanced cooperation in matters of matrimonial property regimes was adopted on 24 June 2016 (Recital 12 of the Preamble, Art. 70 of the Regulation). This implies that the Regulation will be binding and directly applicable only in the EU Member States, which participate in enhanced cooperation (so called “participating Member States”). Those are Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Finland, France, Germany, Greece, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovenia, Spain, and Sweden (Recital 11 of the Preamble, Art. 70 of the Regulation). In this respect, we can appreciate that the Czech Republic decided to get involved in enhanced cooperation too.

It should however be noted that enhanced cooperation on the Regulation is at any time open to all EU Member States, provided they comply with the prescribed requirements. Of course, participation of as many EU Member States as possible is desirable (Art. 328 para. 1 of the TFEU; Recital 13 of the Preamble to the Regulation). Accordingly, Estonia announced its

intention to take part in this form of cooperation as well (Council of the EU [online], 2016). We can consider this as first success. Hopefully other will follow.

In this respect, we must critically assess whether enhanced cooperation in matters of matrimonial property regimes will contribute to further the objectives of the EU and its integration process (similarly Boele-Woelki, 2009, p. 11). Boele-Woelki talks about a “two-speed European Union” and states that “*the cooperation of all Member States ends where the enhanced cooperation of some Member States begins*” (Boele-Woelki, 2009, pp. 4, 13). Pauknerová declares enhanced cooperation as one of the limits of the unification of European private international law (Pauknerová, 2017, p. 186). It is obvious that enhanced cooperation cannot achieve the purposes of European family law in the same way as an EU regulation adopted by all Member States (Fiorini, 2012, p. 15).

Nevertheless, the answer is not so straightforward. Enhanced cooperation can have both positive and negative implications. On the one hand, enhanced cooperation may be seen as a tool, which frustrates the cooperation of the EU as a whole. On the other hand, unanimity on a family law measure cannot be reached at all costs. Moreover, successful enhanced cooperation might inspire the non-participating Member States to join enhanced cooperation at later stage (Boele-Woelki, 2009, p. 13; for thorough analysis of enhanced cooperation in the context of Rome III regulation see Peers, 2010, pp. 339–358; Kuipers, 2012, pp. 201–229). What is more, the total population of eighteen participating Member States was approximately 356.5 million in 2017, which represented almost 70 % of the EU population (Eurostat, Population [online], 2018). We can therefore presume that a significant number of international couples will benefit from enhanced cooperation on Regulation in practice.

To sum up, the Regulation was “*designed to fill in a very serious gap in the process of the European unification of private international law rules in the field of family law*” (Bonomi, 2014, p. 231). The Regulation should facilitate the proper functioning of the internal market by eliminating the obstacles to the free movement of persons who currently face problems due to differences between the national law rules concerning the economic consequences of international marriage (European Commission, Proposal for a decision [online], 2016, p. 10). In order to guarantee legal certainty and predictability of solution for the international couples, the Regulation introduces the unified conflict-of-law rules, which will be identical in all participating Member States, in which they will replace the different national conflict-of-law rules (European Commission, Proposal for a regulation [online], 2016, pp. 5–6).

#### 4. Conclusion

The free movement of persons constitutes one of the principal elements of the European single market, not only for the economically active persons, but also for all EU citizens. It is indisputable fact that the increased integration and greater mobility of persons within the EU result in an increase in the cross-border legal relationships, including family law relations such as international marriage and divorce. From an economic point of view, the property effects of the dissolution of international marriage by divorce are of utmost importance.

Nevertheless, the existing situation, in which both substantive law and the conflict-of-law rules regarding the economic consequences of divorce vary greatly among the EU Member States, does not offer sufficient legal certainty to the couples who decide to make use of their right to free movement, because the courts of the EU Member States apply different rules in particular cases. This may consequently lead to diverse results; for example each spouse’s share in common property upon divorce may vary considerably depending on the court having jurisdiction. The ongoing European integration has thus created a new challenge for European

legislator – the need for the unification or harmonization of family law including matrimonial property law.

Since the EU has no competence to harmonize the rules of substantive family law, the EU legislator focused on the unification of the conflict-of-law rules in matters of matrimonial property regimes. The Regulation, which was successfully enacted in June 2016, will be applicable as from 29 January 2019 (Art. 70 of the Regulation). One of the purposes of the Regulation is to establish common legal framework for the determination of the law applicable to the matrimonial property regimes. The Regulation aims to eliminate the obstacles that the international couples face, both in everyday management of their matrimonial property and in case of its distribution upon divorce. The unified conflict-of-law rules should contribute to greater legal certainty and predictability of solution in each particular case, irrespective of the competent court seized.

The fact that the Regulation was only adopted by way of enhanced cooperation (i. e. not all EU Member States are bound by this instrument) seems to be the most problematic. It should be emphasised that it is very difficult, or even impossible, to overlook the consequences of enhanced cooperation at this stage of development, because the Regulation is still not applicable. After a certain period elapsed, a comparison and evaluation will certainly take place, as well as a review procedure that is foreseen by the Regulation itself (Art. 68 of the Regulation). Enhanced cooperation does not probably constitute the most preferable solution, especially in family law matters. However, author considers this at least a step in the right direction, which could simplify the situation of the international couples in what are often the difficult moments of their lives. We can hope that the non-participating Member States will reconsider their present attitude and decide to join enhanced cooperation later.

### References

- [1] Baarsma, N. A. (2011). *The Europeanisation of International Family Law*. The Hague: T. M. C. Asser Press.
- [2] Boele-Woelki, K. (2005). The Principles of European Family Law: Its Aims and Prospects. *Utrecht Law Review* [online], vol. 1, iss. 2, pp. 160–168 [cit.2018-02-28]. Available at: <http://heinonline.org/>
- [3] Boele-Woelki, K. (2009). New Questions in International Divorce Law within the European Union: Enhanced Cooperation. *Merkourios: Utrecht Journal of International and European Law* [online], vol. 26, iss. 70, pp. 4–13 [cit.2018-02-26]. Available at: <http://heinonline.org/>
- [4] Bonomi, A. (2014). The Proposal for a Regulation on Matrimonial Property: A Critique of the Proposed Rule on the Immutability of the Applicable Law. In Boele-Woelki, K., Dethloff, N. and Gephart, W. (eds.). *Family Law and Culture in Europe: Developments, Challenges and Opportunities*. Cambridge–Antwerp–Portland: Intersentia, pp. 231–247.
- [5] Council of the EU (2016). *18 EU countries agree to clarify rules on property regimes for international couples* [online]. [cit.2018-02-07]. Available at: <http://www.consilium.europa.eu/en/press/press-releases/2016/06/09/property-regimes-for-international-couples/>
- [6] Council Regulation (EU) 2016/1103 of 24 June 2016 implementing enhanced cooperation in the area of jurisdiction, applicable law and the recognition and

- enforcement of decisions in matters of matrimonial property regimes [online]. [cit.2018-02-07]. Available at: <http://eur-lex.europa.eu/>
- [7] Dvořák, J. and Spáčil, J. (2011). *Společné jmění manželů v teorii a v judikatuře*. Praha: Wolters Kluwer.
- [8] European Commission (2016). *Proposal for a Council decision authorising enhanced cooperation in the area of jurisdiction, applicable law and the recognition and enforcement of decisions on the property regimes of international couples, covering both matters of matrimonial property regimes and the property consequences of registered partnerships* [online]. [cit.2018-02-26]. Available at: <http://eur-lex.europa.eu/>
- [9] European Commission (2016). *Proposal for a Council regulation on jurisdiction, applicable law and the recognition and enforcement of decisions in matters of matrimonial property regimes* [online]. [cit.2018-02-21]. Available at: <http://eur-lex.europa.eu/>
- [10] European Commission (2017). *Property effects of marriage and registered partnership* [online]. [cit.2018-02-20]. Available at: [https://e-justice.europa.eu/content\\_property\\_effects\\_of\\_marriage\\_and\\_registered\\_partnership-182-en.do](https://e-justice.europa.eu/content_property_effects_of_marriage_and_registered_partnership-182-en.do)
- [11] European Parliament (2018). *Free movement of persons* [online]. [cit.2018-03-08]. Available at: [http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU\\_4.1.3.html](http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?ftuId=FTU_4.1.3.html)
- [12] Eurostat (2018). *People in the EU – statistics on origin of residents* [online]. [cit.2018-02-24]. Available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/People\\_in\\_the\\_EU\\_%E2%80%93\\_statistics\\_on\\_origin\\_of\\_residents](http://ec.europa.eu/eurostat/statistics-explained/index.php/People_in_the_EU_%E2%80%93_statistics_on_origin_of_residents)
- [13] Eurostat (2018). *Population on 1 January* [online]. [cit.2018-02-26]. Available at: <http://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tps00001&language=en>
- [14] Fiorini, A. (2012). *Which Legal Basis for Family Law? The Way Forward* [online]. [cit.2018-02-22]. Available at: <http://www.europarl.europa.eu/>
- [15] Kroll, K. (2008). Unification of Conflict of Laws in Europe – Matrimonial Property Regimes. In Boele-Woelki, K. and Sverdrup, T. (eds.). *European Challenges in Contemporary Family Law*. Antwerp–Oxford–Portland: Intersentia, pp. 379–393.
- [16] Kuipers, J. (2012). The Law Applicable to Divorce as Test Ground for Enhanced Cooperation. *European Law Journal* [online], vol. 18, no. 2, pp. 201–229 [cit.2018-03-01]. Available at: <https://www.ebscohost.com/>
- [17] Marcos, M. (2013). European Union Civil Justice and European Union Criminal Justice. *Waikato Law Review* [online], vol. 21, pp. 95–124 [cit.2018-02-20]. Available at: <http://heinonline.org/>
- [18] Martiny, D. (2012). Divorce. In Basedow, J., Hopt, K. J., Zimmermann, R. and Stier, A. (eds.). *The Max Planck Encyclopedia of European Private Law: Volume I*. Oxford: Oxford University Press, pp. 493–496.

- [19] Maslowski, S. (2016). Member States' Sovereignty and Freedom of Movement of Union Citizens. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 594–604.
- [20] Pauknerová, M. (2017). Evropské mezinárodní právo soukromé a zamyšlení nad výročí Římských smluv. *Právník*, vol. 156, no. 3, pp. 179–191.
- [21] Peers, S. (2010). Divorce, European Style: The First Authorization of Enhanced Cooperation. *European Constitutional Law Review* [online], vol. 6, iss. 3, pp. 339–358 [cit.2018-03-02]. Available at: <https://www.ebscohost.com/>
- [22] Pintens, W. (2011). Matrimonial Property Law in Europe. In Boele-Woelki, K., Miles, J. and Scherpe, J. M. (eds.). *The Future of Family Property in Europe*. Cambridge–Antwerp–Portland: Intersentia, pp. 19–46.
- [23] Ribot, J. (2011). The financial consequences of divorce across Europe. *ERA Forum* [online], vol. 12, iss. 1, pp. 71–87 [cit.2018-02-20]. Available at: <https://link.springer.com/>
- [24] Rozehnalová, N. (2013). Evropský justiční prostor ve věcech civilních. In Rozehnalová, N., Valdhans, J., Drličková, K. and Kyselovská, T. *Mezinárodní právo soukromé Evropské unie (Nařízení Řím I, Nařízení Řím II, Nařízení Brusel I)*. Praha: Wolters Kluwer, pp. 15–45.
- [25] Scherpe, J. M. (2012). Introduction. In Scherpe, J. M. (ed.). *Marital Agreements and Private Autonomy in Comparative Perspective*. Oxford–Portland: Hart Publishing, pp. 1–7.
- [26] Scoles, E. F. (1989). Choice of Law in Family Property Transactions. In *Recueil des Cours*, vol. 209. Dordrecht: Martinus Nijhoff Publishers, pp. 9–94.
- [27] Siehr, K. (2012). Family Law (International). In Basedow, J., Hopt, K. J., Zimmermann, R. and Stier, A. (eds.). *The Max Planck Encyclopedia of European Private Law: Volume I*. Oxford: Oxford University Press, pp. 681–686.
- [28] Sopková, V. (2004). Vnútorný trh Európskych spoločenstiev (prvý pilier Európskej únie). In Klučka, J. and Mazák, J. et al. *Základy Európskeho práva*. Bratislava: Iura Edition, pp. 313–357.
- [29] Týč, V. (2017). *Základy práva Evropské unie pro ekonomy*. Praha: Leges.
- [30] Van Erp, S. (2010). *Matrimonial property regimes and patrimonial aspects of other forms of union: what problems and proposed solutions? (Proposal for Rome IV Regulation)* [online]. [cit.2018-02-21]. Available at: <http://www.europarl.europa.eu/>
- [31] Viarengo, I. (2011). The EU Proposal on Matrimonial Property Regimes – Some General Remarks. In Šarčević, P. and Volken, P. (eds.). *Yearbook of Private International Law*. Munich: Sellier. European Law Publishers, pp. 199–215.
- [32] Viarengo, I. (2014). The Rome III Regulation in legal practice: case law and comments. *ERA Forum* [online], vol. 15, iss. 4, pp. 547–559 [cit.2018-02-28]. Available at: <https://link.springer.com/>

## **Financial Directives in the European Union**

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### ***Abstract***

*Whole paper is about new Financial Directives of the European Union and their impact on the financial market. The individual directives are called UCITS (Undertakings for the Collective Investment of Transferable Securities) and follow UCITS I. to V., which is in force from 2014 with use to individual member states' legislation in 2016. Alongside, directive MIFID II and MIFIR – Financial Instrument Regulation, entered into force on 01/01/2018. The main objective is to ensure investors' protection across the European Union. The article deals with the real impact of these directives on financial markets in the European Union, especially in the Czech Republic. It seeks answers to questions on how individual member states and in particular financial actors adapt to the application of these current directives.*

***Keywords:*** Financial Directive, Financial Market, MIFID, UCITS

***JEL Classification:*** G18, G21, G19

### **1. Introduction**

Although financial markets are based on a market principle, this principle is not the only determinant of real events in the context of these markets. Due to the particular disposition of the financial markets, it is desirable and necessary to provide adequate regulation, which would be directed to increase the transparency of trading on the markets and ensure that market participants are aware of all relevant aspects relating to the subject of trade and other related consequences.

The important factor in this view is the legislation that often influences the financial markets in a crucial way with a set of concrete measures. The aim of this paper is to introduce institutions dealing with financial market regulation and to evaluate the impact of these institutions and directives on financial markets throughout the European Union. Descriptive and analytical methods are used to fulfill the stated aim.

The following chapters are focused to the introduction of the Investment Company Association, European Fund, Asset Management Association and the MiFID II directives. The defined institutions and directives on the financial markets throughout the European Union are also being analyzed.

### **2. Financial Directives in the EU**

Since 2007, there have been major changes in the regulations governing the financial markets. The following chapters will provide how the changes impact the EU financial market.

## 2.1 Investment Associations

**ICA** (Investment Company Association) is the American Association of Investment Companies. There is an analogy with the British AIC (The Association of Investment Companies), which behaves as an association for investment companies. Association ICA represents wide range of investment companies in the form of investment funds, subsidiary investment companies and other relevant subjects.

The effect of ICA in financial markets is relatively high, which illustrates the case about frequency of disclosure. In this case, Investment Company Association decided with a more frequent disclosure of the portfolio, the overall return on shared funds' shareholders would probably be lower than under the current disclosure standard. Thereby, the standard would be maintained (Hughen and Laatsch, 2018).

Frequent data publishing would increase transaction costs and frequent disclosure of portfolio information would facilitate free management of fund selection, which could unfavorably affect returns if idle activity occurs before institutions are able to set the required position in the price.

Importance and influence of the Investment Company Association on the financial markets determines the United States' position as the largest headquarters for investment funds, which for the year 2013 has shown 45% of the total market share. Europe with 37% has placed on 2nd place, while 7% of the world's investment fund has been created by emerging countries. Countries like Japan, Canada and Australia account have created 12% of the market (EFAMA [online], 2018a).

**EFAMA** (European Fund and Asset Management Association) is a European Investment Management Association. EFAMA represents 28 member associations and 62 corporate members, with almost 23 trillion € of managed assets, of which 14,1 trillion € is allocated to 58,400 funds (the end of 2016). More than 30,600 of these funds fall under the UCITS and the remaining 27,800 funds are under Alternative Investment Funds (EFAMA [online], 2018b).

The organization was founded in 1974 under the title "European Federation of Investment Funds and Companies" (using the French acronym FEFISI). Founding countries were Belgium, France, Germany, the Netherlands, Ireland, Italy and United Kingdom. The organization is planning on a rotation basis, where no permanent headquarters' place is established, only a permanent secretariat is permanently based in Brussels. The fundamental change in the organization's existence came in 2004, when the constitution's articles changed to represent the investment fund and asset management.

The impact of EFAMA on the financial markets is significant. The impact currently affects EFAMA's positive forecasting of asset fund developments. The overall growth in UCITS and non - UCITS assets correlates significantly with the development of future economic growth and exchange rates. This is the case, where the net sale of funds is heavily influenced by the economic prospect and the level of exposure of investment funds to shares. Due to close links between investment fund assets, real GDP and exchange prices, EFAMA predicts an asset growth of between 15.1 - 21.3 trillion € by 2020 (with a modulation of the scenarios of pessimistic, standard and optimistic scenarios) (EFAMA [online], 2018a).

The essential factor influencing EFAMA and its influence in the current conditions is unknown impact on Brexit. Financial harmonization is necessarily given in this connection in the context of globalization (Greenwood and Roderer-Ryning, 2015, p. 325-338). Even though the United Kingdom withdrawal from the European Union has not been debated yet, it is already showing up in the negotiations. Britain, as a key component of EFAMA, can potentially weaken the

influence of the institution. From 62 EFAMA's corporate members, 25 branches are based in London (IPE [online], 2018).

Another significant impact of EFAMA on the financial market takes place in connection with the PRIIPs - Regulation of the European Parliament and of the Council (EU) nr. 1286/2014 by the 26 November 2014 on key product information documents. With effect from January 1<sup>st</sup> 2018, this new European regulation sets out the obligation for banks to provide retail clients according to MiFID categories a Key Information Document (KID) for retail and investment products to improve transparency and facilitate comparison of information relevant to investment activities (Groupe Societe Generale [online], 2018).

EFAMA opposes these PRIIP rules, arguing that they can cause serious damage to investors by providing the required data (particularly in terms of performance and cost). In the best case, it may only confuse investors and, in the worst case, mislead them. Because of this, there is a risk of disturbing confidence in the investment products and in the provided information to investors. EFAMA insists that investors are provided with truly reliable and non-verifiable information about the products on which the resulting decision about investment is based (EFAMA [online], 2018c).

## ***2.2 Financial Directives and their Impact in the EU UCITS***

The highest level of collective investment regulation is in the area of European law in the form of EU regulations and directives. This is primarily a UCITS and AIFMD directive. UCITS is a pan-European regulatory framework that allows to manage and sell investment instruments across the Europe. The fund is structured to allow retail investors access to sophisticated, active strategies that are comply with liquidity and transparency restrictions secured by regulatory oversight. The already analyzed shift in the mindset of an investor seeking returns on hedge funds has led to a substantial increase in UCITS funds. For March 2017, the LuxHedge database reported 420 billion € in assets under the management of 1,380 funds operating under sixteen different strategies (Bouamara etc [online], 2017).

UCITS forms the collective investment standards enshrined by the European Union in the context of the collective investment of transferable securities. It defines the rules and legislation on investing in collective investment securities. The abbreviation UCITS means "Undertakings of Collective Investments in Transferable Securities Directive" (Szylar, 2013). The regulations are transposed into the Collective Investment Act (not applicable to trading in capital market).

The history of UCITS dates back to 1985, when UCITS I was published to create a single regulatory framework for mutual funds in the context of Europe (the so-called "European passport" for funds). Luxembourg was the first in 1988 to implement the UCITS, and seven UCITS' funds were established during the coming month. In 1999, over 3 trillion € was invested in UCITS' funds (Muller and Ruttiens, 2013). UCITS therefore constituted a certain authorization by which the investment companies of the member states could sell their products also in the territory of other states of the European Community. A major amendment took place in 2001 in the form of Directives 2001/107/EC and 2001/108/ES, i.e. UCITS II and UCITS III. The main objective was to strengthen investors' confidence in collective investment on a global scale (Moloney, 2002).

Therefore, investor's protection was strengthened by abolishing restrictions and diverging approaches across countries (Beaudoin and Olivier, 2010, p. 20-24). Also, appropriate conditions have been put in place to prevent conflicts between investors and fund managers, so investment management does not prioritize its interests over the interests of prime investors.



For greater transparency, the obligation to standardize the calculation of total costs was established “TER” (Total Expensive Ratio) and this result published within the fund (UCITS XXV [online], 2018).

In 2009, the directive called UCITS IV, which was once again implemented first by Luxembourg (this time with five other countries), was approved. At the end of 2010, nearly 6 trillion € was invested in more than 36,000 UCITS funds. UCITS IV covers and modifies all previous UCITS directives with extension to standard fund mergers, disclosure for investors, disclosure of risk ration and return (SRRI - Synthetic risk and reward indicator). UCITS V amended the UCITS IV directive in 2014, in the framework of the activities of depositaries, remuneration and sanction principles with effect from 18<sup>th</sup> March 2016.

UCITS can be grasped as a trend of European Union regulation to shift attention from increasing regulation in the area of consumer protection to regulating market protection as such as increasing its transparency (Anderberg and Bolton, 2006, p. 13-18). One of the main UCITS’ motives is the investor’s protection as a consumer of the financial market. UCITS is aimed at protecting the customer’s assets, setting appropriate limits, diversification and asset classes into which the fund manager can invest.

UCITS is used to set basic standards to protect investors. Similar forms of standards have been introduced in other areas of the capital market, f.e. in relation to the provision of investment services through Directive 2004/39/EC of the European Parliament and of the council on markets in financial instruments (MiFID). The protection of the market itself should also provide consumer protection through mediation.

It is important to clearly define the role of the entity within the financial market for the application of UCITS. In this aspect, it is being used the exhaustive identification of the activities, which are the usual attachment of the individual adjustments. E.g. very precise is the identification of areas of activity that includes administration - activities that are related to the investment fund but which can no longer be included under the definition of management.

Administrator is the entity that deals with clients, but clients do not directly allocate their assets into his management - the administrator acts as an intermediary. Currently, there is a valid exhaustive list of UCITS activities. This is analogous to the AIFMD enumeration, consists of f.e. bookkeeping activity, legal services, compliance and internal audit, investor complaints solving, valuation of assets and debts, valuation of the book-entry securities issued by the fund etc.

The significance of UCITS is particularly important in the field of the harmonization laws and regulations concerning collective investment in the member states of the European Union. Due to regulatory steps, UCITS funds can be compared to each other according to the obligation to publish exhaustively defined data and the methodology of calculations. Together with MiFID, this adjustment increases transparency in the financial markets.

In the UCITS scheme, the public policy applies. This public policy excludes the possibility of creating private funds addressed only to a narrow circle of investors. The public’s principle is linked to the transparency and disclosure of facts that have important information value for investors, in particular under the rules for the creation and publication of founding documents, statutes, prospectuses and annual reports.

UCITS also provide provides diversification of risk in the promotion of collective investment activities. The limits are derived from two criteria: the amount of the assets of the collective investment undertaking (assets in a single entity’s portfolio may not consist of more than 5% of the money or capital market instruments issued by one issuer - but there are exceptions, e.g.

for an index fund with a limit of 35%) and the volume of the issue of the acquired title (the volume of the shares must not have a significant effect on the issuer's management - 5%, for other securities this limit is 10% of the volume of paper from one issuer and the securities issued by other collective investment undertakings 25%). Commission Directive 2007/14/EC laying down detailed rules for the implementation of certain provisions of directive 2004/109/EC on the harmonization of transparency requirements in relation to information about issuers whose securities are dealt in on a regulated market.

Limits are stated deliberately, with the need to indicate a potential negative, which is based on a high degree of restraint, where the directives specify precisely what investment limits and investment instruments UCITS can invest in. There is a question of how to determine the right boundary between the potential release of investment limits and investor protection, or the extent to which funds are harmonized.

### **MIFID**

The regulation in the form of AIFMD (European directive determining the legislation on investing in alternative fund securities - Alternative Investment Fund Managers Directive) is based on different objectives than UCITS. The origins of the AIFMD are related to the implementation period in which Europe was in a deep economic crisis. The adjustment is intended to mitigate or prevent some of the negative effects that have allowed the crisis to develop into a global dimension (Beythán and Virard-Canto, 2012, p. 64-72).

However, a common element with UCITS lies in the focus on market protection with a secondary impact on consumer protection (European Commission [online], 2018). A new fund adjustment under AIFMD focuses on large entities that manage assets over 100,000,000 € or 500,000,000 € if such company does not leverage or the fund is closed for at least five years.

In domestic conditions, the AIFMD directive has been transposed to take an advantage of the opportunities offered by the directive. Special funds designated for the public (alternative to the UCITS) are thus automatically subject to AIFMD adjustment regardless of the volume of assets in the fund assets. According to that is the special fund manager entitled to exceed the applicable limit. However, the risk distribution remains more stringent than in the AIFMD requirements. Special funds also include a European passport with the possibility to offer them in other EU countries (MFČR [online], 2018).

The new regulation of AIFMD mainly applies to high volume investment funds, precisely hedge funds. If there is bad hedge fund management, the adverse effects are also transferred to the management of the hedge fund, which affects the entire economic system. This trend towards market transparency and integrity is also reflected in the directive of the European Parliament and the Council 201/65/EU on markets in Financial Instruments (MiFID II), which strengthens the transparency of market infrastructure within derivatives markets (directive 2014/65/EU).

The MiFID Directive fundamentally determines the activities realized in the markets of financial instruments (Tanzi et al., 2013, p. 51-68). In some cases, MiFID also speaks of a revolution (Wojcik et al., 2007, p. 167-173) and occasionally in connection with lobbying (Woll, 2013, p. 555-572). MiFID II is seen as clearly stricter rules for regulating European financial markets (Busch, 2018, p. 126-142) (Busch, 2016, p. 72-82).

Currently, MiFID II prohibits asset managers from using research that they have not paid. It is the European Union's interest in suppressing investment research. It will be illegal for asset managers to obtain research for which they have not paid, creating unprecedented information

asymmetries among managers based on their ability/willingness and available research budget (IPE [online], 2018b).

The origin of this change can be traced back to the UK Myners report of 2001, which was set against the linking of research commission costs. Currently, asset managers offer solutions to absorb research costs by creating a research payment account (RPA) for customers. Two models are used here (IPE [online], 2018b):

- *Accounting (Swedish) model* - originally designed in the early versions of the MiFID II guidelines, with promotion especially from Scandinavian fund managers. According to the model, the asset manager sets a separate annual research fee which will be charged directly to the client to absorb all the costs of research that the manager uses on behalf of the client. To cover payments, monthly or quarterly payments are used, depending on a reasonable amount of time to the frequency with the entity makes payments to its research providers.
- *Transaction Approach* - An asset manager performs research on business mediation to absorb transaction costs.

Both approaches implement the fact that research budgets cannot be determined by the volume or value of transactions, and they need to be aggregated at the client level. If the cost of research exceeds the budgets, administrators have to reimburse these costs from their own resources. In addition, administrators are required to disclose which investment research providers do they use, why and how research benefits their clients.

If the main importance and purpose of the instrument is to be identified in the financial market, then it is undoubtedly the interest in ensuring transparency of clients' awareness of individual products (see MiFID II) and the implementation of clear rules (see EFAMA). As a part of the client's protection, a trend based on relationship between the protection of the market itself and the client is also applied. With this trend, positive effects will also move to the client protection.

### 3. Conclusion

The impact of this regulation in the form of directives and institutions has a major impact on the whole EU market with the commitment for EU members to these directives. However, apart from the impact of the directives themselves, every proverbial party proclamation on the market also affects the behavior of participants in the relevant markets.

From the actual and specific measures was mentioned the influence of the Investment Company Association on the frequency of portfolios in the context of mutual funds with the argumentation of the impact on revenues. EFAMA has issued a positive prediction on the development of fund assets in relation to all development scenarios. EFAMA also has an impact in relation to PRIIPs in its obligation (in effect from 1 January 2018) to provide banks with a key information document for retail clients in order to increase trading transparency. EFAMA has defined against this rule when it could be confusing for investors. A separate question within EFAMA is further development after Brexit.

The UCITS (which establishes the collective investment standards embed in the European Union) determines the rules and legislation of collective investment. The adjustment is aimed at strengthening investors' confidence with their protection and the unification of national conditions. Individual measures have a long-term effect on reconciling the interests of stakeholders with market regulation. UCITS provide diversification of risk, transparency and

trading limits. MiFID II currently operates in the line with the European Union's interest in suppressing investment research. Accounting (Swedish) model and transaction approach is offered as a solution.

On the basis of the above the stated objective has been fulfilled. The paper provides a presentation of institutions dealing with financial market regulation with an assessment of the impact of these institutions (and financial directives) on the financial markets in the context of the European Union.

## References

- [1] Anderberg, K.; Bolton, L. (2006). *UCITS: A developing model for the future of the European investment fund marketplace*. Euromoney International Investment & Securities Review, 13-18.
- [2] Beaudoin, D. Olivier, Ch. (2010). *UCITS III funds: one size does not fit all*. Swiss Hedge Magazine 2nd Half 2010, 20-24.
- [3] Beythan, H. Virard-Canto, C. (2012). *Is the draft UCITS V directive a cloned version of the Alternative Investment Fund Managers Directive?* Journal of Securities Operations & Custody, 64-72.
- [4] Bouamara N. et al. (2017). *The Alpha and Beta of Equity Hedge UCITS Funds: Implications for Momentum Investing*. Factor Investing From Traditional to Alternative Risk Premia. 415–446. DOI: 10.1016/B978-1-78548-201-4.50016-7.
- [5] Busch, D. (2018). *MiFID II and MiFIR: stricter rules for the EU financial markets*, Law and Financial Markets Review, 11:2-3, 126-142, DOI: 10.1080/17521440.2017.1412060.
- [6] Busch, D. (2016). *MiFID II: regulating high frequency trading, other forms of algorithmic trading and direct electronic market access*, Law and Financial Markets Review, 10:2, 72-82, DOI: 10.1080/17521440.2016.1200333.
- [7] EFAMA (2018b). *About EFAMA* [online]. [cit. 2018-02-17]. Available at: <[www.efama.org/About/SitePages/Home.aspx](http://www.efama.org/About/SitePages/Home.aspx)>.
- [8] EFAMA (2018c). *EFAMA Alerts That the New PRIIPs Rules Will Confuse and Mislead Investors* [online]. [cit. 2018-02-17]. Available at: <<https://www.efama.org/Pages/EFAMA-alerts-that-the-new-PRIIPs-rules-will-confuse-and-mislead-investors.aspx>>.
- [9] EFAMA (2018a). *Reports, Statistics and Key Figures* [online]. [cit. 2018-02-17]. Available at: <[www.efama.org/Publications/Statistics/Other%20Reports/KeyFactsFigures.pdf](http://www.efama.org/Publications/Statistics/Other%20Reports/KeyFactsFigures.pdf)>.
- [10] European Commission (2018). *Directive on Alternative Investment Fund Managers ('AIFMD'): Frequently Asked Questions* [online]. [cit. 2018-02-10]. Available at: <[http://europa.eu/rapid/pressrelease\\_MEMO-10-572\\_en.htm](http://europa.eu/rapid/pressrelease_MEMO-10-572_en.htm)>.
- [11] Greenwood, J. Roederer-Rynning, Ch. (2015). *The "Europeanization" of the Basel process: Financial harmonization between globalization and parliamentarization*. Regulation & Governance, 9.4: 325-338.

- [12] Groupe Societe Generale (2018). *PRIIPs Regulation (EU) No 1286/2014 of the European Parliament and of the Council* [online]. [cit. 2018-02-17]. Available at: <<https://www.brd.ro/en/priip>>.
- [13] Hughen, J. Ch. Laatsch, F. E. (2018). *The Frequency of Fund Disclosure: Do Investors Really Care?*
- [14] IPE. EFAMA (2018). *Brexit Already Raising Questions* [online]. [cit. 2018-02-17]. Available at: <<https://www.ipe.com/brexit/efama-brexit-already-raising-questions-for-eu-regulation/10016442.article>>.
- [15] IPE (2018b). *Special Reports – Investment Research*. [online]. [cit. 2018-02-17]. Available at: <<https://www.ipe.com/reports/special-reports/investment-research/>>.
- [16] Jančíková, E. Pásztorová, J. (2016). Banking Union and the Stability of the Financial System in EU. *Proceedings of the 3rd International Conference on European Integration*. VŠB - Technical University of Ostrava. 391-399. ISBN 978-80-248-3911-0.
- [17] MFČR (2018). *Důvodová zpráva k návrhu ZISIF* [online]. [cit. 2018-02-17]. Available at: <[http://www.mfcr.cz/assets/cs/media/Duvodova-zprava\\_2013-01-17\\_Duvodova-zpravak-navrhu-ZISIF.pdf](http://www.mfcr.cz/assets/cs/media/Duvodova-zprava_2013-01-17_Duvodova-zpravak-navrhu-ZISIF.pdf)>.
- [18] Moloney, N. et al. (2002) *EC securities regulation*. Oxford: Oxford University Press.
- [19] Muller, Ch. Ruttiens, A (2013). *A practical guide to UCITS funds and their risk management*. Edipro.
- [20] Směrnice 2001/107/ES a 2001/108/ES.
- [21] Směrnice Evropského parlamentu a Rady 2004/39/ES o trzích finančních nástrojů.
- [22] Směrnice Evropského parlamentu a Rady 2014/65/EU o trzích finančních nástrojů.
- [23] Směrnice Komise č. 2007/14/ES, kterou se stanovují prováděcí pravidla k některým ustanovením směrnice č. 2004/109/ES o harmonizaci požadavků na transparentnost týkající se informací o emitentech, jejichž cenné papíry jsou obchodovány na regulovaném trhu.
- [24] Szyilar, Ch. (2013) *Risk management under UCITS III/IV: new challenges for the fund industry*. John Wiley & Sons.
- [25] Tanzi P. et al. (2013). Managing compliance risk after MiFID. *Journal of Financial Regulation and Compliance*, Vol. 21 Issue: 1, 51-68, <https://doi.org/10.1108/13581981311297821>.
- [26] UCITS XXV (2018). *Timeline of UCITS* [online]. [cit. 2018-02-10]. Available at: <<http://www.ucitsxxv.eu/index.php/ucits-timeline/>>.
- [27] Wojcik, D. et al. (2007) *European financial geographies. Growth and change*. 38.2: 167-173.
- [28] Woll, C. (2013). Lobbying under pressure: the effect of salience on European Union hedge fund regulation. *JCMS: Journal of Common Market Studies*, 51.3: 555-572.

## **Priorities of Ukrainian Marketing Standards Development in the Context of EU Integration Processes Challenges**

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### **Abstract**

*In the article, the theses are proved – Ukraine's ambitions for European integration should be supported by the necessary measures, namely: an open competitive economy formation; a single market development and society with high-quality goods (above all, food products) providing; socially responsible marketing and ecomarketing introduction. The purpose of the article was the role and priorities of marketing standards development in the context of European integration processes challenges to substantiate. To achieve this goal, appropriate methods were used: comparative analysis and content analysis of scientific and popular sources as well as its logical analysis, induction and deduction. The study was conducted in 2016–2018. Based on the analysis, the following priorities for the development of marketing standards have been identified: macro-marketing standards in the “state – business” system, eco-marketing standards in the three-level “state – business – consumer” system, micro-marketing standards in “consumer-oriented enterprise” system.*

**Keywords:** *eco-marketing standards, EU integration processes, macro-marketing standards, micro-marketing standards*

**JEL Classification:** *F20, F60, I10, M30*

## **1. Introduction**

In the context of the transformation of economic relations, the globalization of world markets, the instability of the market environment, a new phase of Ukraine's integration into the world economic space and the construction of new political and economic systems, there is a need to improve existing and find new ways to ensure economic development.

This need, in the face of growing competition, is facing not only Ukraine but, for our country, it has become a complex problem. An indication of the relevance of this problem is the Global

Competitiveness Rating of the World Economic Forum (WEF), according to which Ukraine occupied in 2017-2018 the 81st position out of 137 countries (Ekonomichna pravda [online], 2016). This indicator turns into an eloquent proof of the complexity of existing systemic obstacles in achieving the goal, if we recall its dynamics in 2011-2017, particularly: 89, 73, 84, 76, 79, 85, 81 (Kupe and Mackonina [online], 2016). And the graphic representation of this dynamics is a sinusoid that holds firmly between the 73<sup>rd</sup> place (2012) and the 89<sup>th</sup> place (2011) and does not show a trend towards improvement.

## **2. Problem Formulation and Methodology**

A serious problem is the creation of such economic conditions that would finally make it possible to ensure the presence of three basic determinants, namely: 1) science, technologies and innovations development; 2) investment in industry and agriculture increasing; business models improvement; and all this will contribute to the proper quality and corresponding technological level of industrial products production growth.

It is clear that the above conditions/factors will not gain the necessary weight without the proper openness of the markets which in turn updates and strengthens the importance of the standardization system in solving the problems of economic growth.

### ***2.1 The Purpose of the Article***

The purpose of the article was the role and priorities of marketing standards development in the context of European integration processes challenges to substantiate.

### ***2.2 The Methodology of the Study***

To achieve this goal, appropriate methods were used: comparative analysis and content analysis of scientific and popular sources as well as its logical analysis, induction and deduction. The study was conducted in 2016–2018. Based on the analysis, the following priorities for the development of marketing standards have been identified: macro-marketing standards in the “state – business” system, eco-marketing standards in the three-level “state – business – consumer” system, micro-marketing standards in “consumer-oriented enterprise” system.

## **3. Problem Solution**

According to Directive 98/34 / EC, European standards are certain technical specifications adopted by the European Standardization Organizations for the purpose of their use several times, often or even permanently. However, their compliance is not obligatory (Organ Certyfikacji [online], 2017).

Countries that have an objective to cooperate with the EU must adhere to these standards by establishing national standards as closely as possible (harmonized) with EU standards. Recently, in the publications, we find the definition of harmonized standards as a special category in the European standards. However, in fact, "harmonized standards" – a relatively new special term, which is used in the Directives of the New Approach to Standardization, with a view to the legal determination of technical specifications, more commonly known as "European Standards". It follows from this that the special role of the Harmonized Standards

is often exaggerated because, in the Directives of the New Approach to Standardization, harmonized standards are of a purely advisory nature (Dzieńdziora, Smolarek, 2016).

According to the New Approach directives, harmonized standards will only come into force when standardization organizations of European products formally transmit such standards to the EU Commission for consideration and determine the same requirements to products. Next, the EU Commission together with the European Standardization Organization at the official level issue a mandate.

Continuing the process, organizations responsible for the standardization of European goods receive an official position in accordance with a mandate developed by domestic law. The period of non-interference begins when a mandate is adopted and a working program of the activities of these organizations is developed. The very period of non-interference is aimed at regulating the standards, that is, no state body at the national level has the right to develop a national standard if such (identical) standard already exists in the category of European standards (Kovalchuk, 2016).

It should be noted that the development of standards in the European Union is primarily aimed at achieving the following three global goals: the formation of an open and competitive economy; the development of a single market and the provision of quality food products to society; the creation and use of effective business models, as well as their coordination with the processes of standardization of products and enterprises in general. Taking into account the above, it is expedient to consider in detail the mentioned goals in the context of their comparison with the integration tasks of Ukraine.

### ***3.1 An Open and Competitive Economy Formation***

The European Commission defines competitiveness as "... the steady growth of living standards of a nation or region and the lowest possible level of forced unemployment" (Potapenko, 2012, pp. 23-38). Since there are sufficient definitions of competitiveness, we restrict ourselves to their brief generalization – competitiveness (at least in the long run) can be determined by the level of productivity of the enterprise, the nation, the region and ensure the following (Manuilovich, 2013; Ocinka perspektiv, 2017; Schroder, 2011):

- "reasonable" growth, that is, the growth of an economy based on knowledge and innovation;
- steady growth, namely, promotion of the more efficient use of resources, development of an environmentally-oriented competitive economy;
- multi-vector growth by stimulating an economy with a high employment rate, which will promote social and territorial cohesion.

Such a comprehensive growth is impossible without due attention to the personnel potential, which still remains high enough in Ukraine, despite the prolonged and powerful "brain drain". In our opinion, the priority and urgent task should be to preserve, encourage and fully support human resources with an emphasis on engineering and scientific personnel. And only in such a way will it be possible to realize the following (derivative) tasks, which we include: a) the development of information and communication technologies (in terms of improving the quality and accessibility of communications, increasing the level of coverage of the Internet in educational institutions, etc.); b) to increase the size of the market of innovations by reloading scientific institutions and transforming them into creative, capable institutions open to cooperation with business and the international community in accordance with the principle of "science without borders" (Esmailpour and Hoseini, 2017).



Therefore, today it is necessary to form the basis for the achievement of the specified tasks. In particular, during the development of standards, it is very important to take into account innovative processes and trends, achievements in science and technology, thus bringing the state of the Ukrainian market in line with the requirements of international and European standards. It is clear that under such conditions, the sale of products on the international or European markets will emerge from the threats that currently exist due to technical barriers to trade (Simarmata and Keke, 2017).

### ***3.2 A Single Market and the Provision of Quality Food Products to Society Development***

The European internal market originates from 1951, and its final formation took place in 1985 with the adoption of the White Paper "Completing the formation of the internal market" (Reshota [online], 2012; Okreglicka, Gorzen-Mitka and Ogreaan, 2015; Barcik, 2016; Mynarzová, Kaňa and Okreglicka, 2016). In this book, it was proposed to eliminate the physical, technical and tax borders for the free movement of goods, persons, services and capital between EU member states. This, in turn, led to the creation of new strategies for economic development, stimulated the search for new concepts and actions, methods of sales and contacts with the market (Dziwiński, 2016). The combination of these and many other innovations gradually began to be called Euromarketing in the EU countries (Germany, France, Spain, Poland, etc.).

According to Y. Wiktor, "Euromarketing is a list of principles of the company's activity on such a specific international market as the EU internal market" (Gołab-Andzejak, 2015). Such a market simultaneously combines two opposite characteristics. On the one hand, it is homogeneous, since it is formed under the influence of the market mechanisms regulating the single EU member states: there are common rules for doing business, antitrust laws, a common trade policy; is based on the principles of economic freedom, without the use of protective customs barriers, free movement of capital, population, material goods, etc. However, on the other hand, it is heterogeneous, since each country has different levels of social and economic development, cultural characteristics, religion, historical values and assets, and so on. And such in this context, an extremely important element of the development of standards in the EU is the focus on a "stronger, deeper and wider single market".

The given brief historical certificate testifies to the importance of the in-depth study of the whole spectrum of factors, which ultimately determine the very possibility of integrating Ukrainian enterprises into EU markets and the prospects for ensuring their competitiveness. In any case, two tasks are indisputable.

The first. Ukrainian entrepreneurs should maximally focus on compliance with EU standards (at all stages of development, storage and transportation of products), as well as the positioning of their products in accordance with the ratio in the "price-quality" system adopted on European markets. These two benchmarks are a prerequisite for the successful development of any enterprise and the release of its products on new markets. In this context, it is important to pay attention to the choice of reliable suppliers of quality raw materials, the proper level of input control, and so on. Given that a significant part of Ukrainian standards has not been updated for a long time, the Ukrainian companies faced an urgent requirement: to participate in monitoring the process of updating EU standards (which are directly dependent on market requirements) and try to be relevant to them. In a rapidly changing market situation, the need to update these standards becomes without exaggeration a vital task.

The second. It is necessary to create a multifunctional system of integrated communications, intended to provide information producers (on potential sales markets) and consumers (on the diverse products of producers). The above suggestion follows from the results of the World Bank research, according to which about half of the exporting enterprises, among the restrictive factors of commercial character, note the lack of means for examining export markets, as well as insufficient consumer awareness, which reduces the pace of promotion of their goods and services (Svitoviy Bank [online], 2018). The level of informing potential consumers about goods or services should be appropriate.

### ***3.3 Effective Business Models Creation and Using***

Globalization processes in the economy and strengthening of non-price competition stimulate enterprises to find innovative ways of development which are connected primarily with the problems of improving the quality of manufactured products, adapting it to international requirements (Harris, Sithole and Kibirige, 2017). However, for the vast majority of Ukrainian small and medium-sized enterprises, these problems are combined with the problems of harmonizing standards for the production of own products with European standards. After all, processes of harmonization and adaptation of legislation in the field of technical regulation require not only a long time but also significant material resources, which in a large number of enterprises simply do not exist. For information: the total cost of adapting to the EU standards of only one sector – the meat industry – Poland amounted to about 2 billion euros (Ocinka perspektiv, 2017).

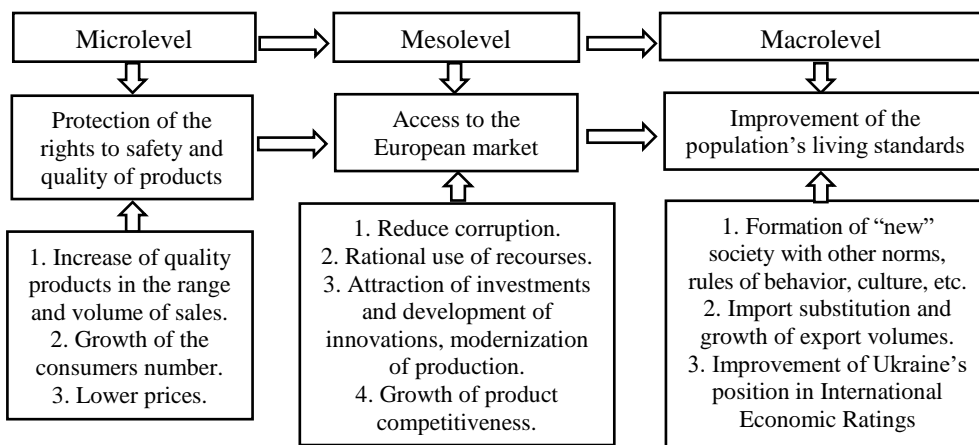
At the same time, in accordance with Article 17 of the Association Agreement between Ukraine and the EU, cooperation between the parties will also cover the promotion of policies in the areas of product standards, production requirements and quality schemes (Slyva [online], 2013). To this end, the Ukrainian legislation needs to implement the requirements of the EU directives and regulations, at least 80% of the current European standards, plus to choose or form an effective business model of interaction. Therefore, the improvement of the business model of the enterprise, which will be comprehensive, and therefore aimed at the formation of a quality management system, is a guarantee of the ability of the organization to produce and supply products stable, which corresponds to the European standards and becomes a priority. The development, implementation and maintenance of the business model in the state of capacity are one of the strategic directions of the business entities, as it should significantly increase their efficiency, economic efficiency and competitiveness on the world market (Zhi and Shoujian, 2014).

### ***3.4 The Benefits of Implementing European Standards in Ukraine at Micro, Meso and Macroeconomic Levels***

Ukraine pays great attention to the implementation of the requirements of international standards, as this is one of the conditions for joining the European Union. Besides when forming new ones or using existing business models at the enterprise, we consider it appropriate to take into account relevant approaches (Bebiakova, 2016). The business model should be considered as a managerial concept on how to create value for customers through the harmonization of standards and increase the value of the enterprise. In our opinion, such a combination of cost and value-added approaches to business modelling will enable us to accelerate the process of harmonization of standards in our country, which in the strategic perspective will receive from it such advantages (Shulgina, 2016):

- at the micro-level, the standards will most effectively promote the active introduction of innovative technologies, the economical use of raw materials and materials, extension of the shelf life, etc.;
- at the meso-level introduction of standards at enterprises will have a direct impact on the industry, as it will increase the competitiveness of enterprises, enlargement the number of investments in production, more efficient use of available resources, raise the attention to the ecological component, etc.;
- at the macro level, the augmentation in the number of certified enterprises in accordance with international standards should facilitate trade in the world market, improve the image of the state, develop the standard of the population's living and strengthen food security, etc. (Figure 1).

**Figure 1: The Benefits of Implementing European Standards in Ukraine**



Source: own elaboration (2017) on the base of (Ekonomichna Pravda, 2016; Potapenko, 2012)

#### 4. Conclusion

Given the integration intentions of Ukraine, harmonization of domestic standards with European in the fields of product quality, marketing standards and service standards is relevant. In harmonizing standards, Ukraine must coordinate its actions with the global goals of developing standards in the European Union.

In particular, the achievement of the first global goal – the formation of an open and competitive economy – requires the preservation, encouragement and support of human resources; developing information and communication technologies and increasing the size of the innovation market.

Objectives to achieve the second global goal – the development of a single market and the provision of quality food products to society – is the maximum orientation of enterprises to comply with EU standards; the positioning of their products in accordance with the ratio in the "price-quality" system adopted on European markets; creation of a multifunctional integrated communications system to inform producers about potential markets and consumers about diverse product manufacturers.

The third goal - the creation and use of effective business models, as well as their alignment with the processes of standardization of products and enterprises in general - requires the combination of value and value-added approaches to business modelling.

From the introduction of European standards in Ukraine, benefits will be gained on the micro, meso and macroeconomic levels of public life.

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### **References**

- [1] Barcik, A. (2016). Co-opetition of Enterprises in Terms of the European Competition Policy. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 65–71.
- [2] Bebiakova, D. (2016). EU – Ukraine Trade Relations. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 72–79.
- [3] Dzieńdziora, J. and Smolarek, M. (2016). Contemporary Challenges of Human Resources Management in Small and Medium Enterprises in Conditions of European Integration on the Example of Region of Silesia in Poland. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 182–189.
- [4] Dziwiński, P. (2016). Restructuring of Small and Medium-Sized Enterprises – the European Perspective. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 190–196.
- [5] Ekonomichna pravda. (2016). *Ukraina v poshuku novick konkurentnick perevah* [online]. [cit. 2017-09-22]. Available at: <http://www.epravda.com.ua/cdn/cdn1/2016/10/ukraina-u-poshuku-novyh-konkurentnyh-perevag/index.html>.
- [6] Esmaeilpour, M. and Hoseini, M. (2017). Explaining the Impact of Service Quality on Identity and Brand Personality. *Polish Journal of Management Studies*, vol. 16 (2), pp. 88–98.
- [7] Gołąb-Andzejak, E. (2015). Lojalność eurokonsumentów pokolenia Y. *Handel wewnętrzný*, vol. 1 (354), pp. 110–119.
- [8] Harris, K., Sithole, A. and Kibirige, J. (2017). A needs Assessment for the Adoption of Next Generation Science Standards (NGSS) in K-12 Education in the United States. *Journal of Education and Training Studies*, vol. 5, iss. 9, pp. 54–62.
- [9] Kovalchuk, S. (2016). Europejski orijentyry agrarnoi sfery Ukrainy: perspektivy ta mozhlivosti. *Ekonomika ta suspilstvo*, vol. 2, pp. 54–60.
- [10] Kupe, T. and Mackonina, Y. (2016). Ociniuyuchi Ukrainu: misce sered 40 naykrashchick krain za Indeksom globalnoi konkurentospromozhnosti. *Ekonomika*,

- Vol. 1719. [online]. [cit. 2017-11-19]. Available at: <https://voxukraine.org/uk/evaluating-ukraine-top-40-of-the-global-competitiveness-index-ua/>.
- [11] Manuilovich, Y. (2013). Doslidzhennia sutnosti poniattia konkurentospromozhnosti. *Marketing i menedzhment innovaciy*, vol. 4, pp. 274–282.
- [12] Mynarzová, M., Kaňa, R. and Okreglicka, M. (2016). Selected Aspects of Public Support for Small and Medium-sized Enterprises in European Union through the Prism of Block Exemption Regulation. In *International Conference Contemporary Issues in Theory and Practice of Management CITPM 2016*. Częstochowa: Częstochowa University of Technology, Faculty of Management, 2016, pp. 294-301.
- [13] Ocinka perspektyv ta mozhlyvostey dla agropromyslovogo kompleksu Ukrainy vnaslidok pidpysannia Ugody pro asociaciyu mizh Ukrainoyu ta Europeyskim Soyuzom. (2017). *Analitychna zapyska*. [online]. [cit. 2017-11-19]. Available at: <http://www.niss.gov.ua/articles/1633/>.
- [14] Okreglicka, M., Gorzen-Mitka, I. and Ogreaan, C. (2015). Management Challenges in the Context of a Complex View - SMEs Perspective. *Procedia Economics and Finance*, vol. 34, pp. 445-452.
- [15] Organ Certyfikacii “Centre Certyfikacii Materialiv i vyrobiv”. (2017). *Informacia*. [online]. [cit. 2017-10-28]. Available at: <http://ccmg.com.ua/news/garmon-standart.html>
- [16] Potapenko, V. (2012). *Strategichni priorytety bezpechnogo rozvytku Ukrainy na zasadach “zelenoi ekonomiky”*. Kyiv: NISD.
- [17] Reshota, O. (2012). Stanovlennia vnutrishniogo rynku Europeiskogo Soyuzu: peredumovy ta osoblyvosti. *Demokratychni vriaduvannia*, vol. 9. [online]. [cit. 2017-12-07]. Available at: [http://www.lvivacademy.com/vidavnytstvo\\_1/visnik9/fail/Reshota.pdf](http://www.lvivacademy.com/vidavnytstvo_1/visnik9/fail/Reshota.pdf).
- [18] Schroder, H. (2011). Harmonization, Equivalence and Mutual Recognition of Standards in WTO Law. *Kluwer Law International*, vol. 1, pp. 178–192.
- [19] Shulgina L. (2016). Development of the three-level system of cooperative marketing in ukrainian tourism. In *International Conference Contemporary Issues in Theory and Practice of Management CITPM 2016*. Częstochowa: Częstochowa University of Technology, Faculty of Management, 2016, pp. 376–383.
- [20] Simarmata, J. and Keke, Y. (2017). How to Establish Customer Trust and Retention in a Highly Competitive Airline Business. *Polish Journal of Management Studies*, vol. 16 (1), pp. 202–214.
- [21] Slyva, Y. (2013). *Suchasnyy stan rozvytku mizhnarodnoi i nacionalnoi normatyvnyck baz shchodo systemy upravlinnia bezpechnistiu ckarchovick produktiv*. [online]. [cit. 2018-02-08]. Available at: [http://nbuv.gov.ua/j-pdf/Nd\\_2013\\_6\\_11.pdf](http://nbuv.gov.ua/j-pdf/Nd_2013_6_11.pdf).
- [22] Svitoviy bank ta Ukraina. (2018). *Informaciya* [online]. [cit. 2018-02-08]. Available at: <http://siteresources.worldbank.org/UKRAINE/INUKRAINIANEXTN/Resources/455680-1316425374845/WBUkraineUkr.pdf>.
- [23] Zhi, S. and Shoujian, Z. (2014). Complex System Modeling on Establishment of Construction Standard System. *Structural Survey*, vol. 32, iss. 1, pp. 5–13.

## Do We Need a European Army?

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### **Abstract**

*Security environment of Europe and its neighborhood has undergone permanent erosion in recent years. Terrorism, illegal migration, failed states, civil wars in the neighborhood of the European Union (EU), as well as tensions with Russia are just some of the challenges for European security. Fortunately, more efforts has been done in the field of defence in the last two years than in the past twenty years. As a consequence, actions undertaken by European decision makers are heading towards creation of a European Army. The paper presents arguments for and common obstacles regarding creation of an European Army. Then discusses main activities inside the Common Security and Defence Policy which have triggered crucial actions leading to future building of a European Army. Finally, there is an answer to the question about rightness of such an initiative and general conclusion suggesting an increase of efforts by the EU member states in the field of defence rather than building common armed forces.*

**Keywords:** *Common Security and Defence Policy, European Army, European Defence Fund, European defence union, Permanent Structured Cooperation*

**JEL Classification:** *F50, F55, G20*

### **1. Introduction**

This type of wording of the question, as in the title of the article, provides the possibility to give a simple answer – “yes” or “no”. Unfortunately, in the case of a question about the need to expand the European structures with common armed forces, the answer is not so unequivocal. This results from the fact that the subject idea will have its supporters, as well as opponents, who will provide the appropriate arguments. It should be clearly emphasized that building European defence capabilities is crucial, even required in the face of emerging new challenges in the sphere of European (and not only) security. However, each action should be deliberate, therefore building common European armed forces must be based on foundations that all European Union (EU) Member States will identify with. Meanwhile, even now at the stage of free discussion, there are many discrepancies between European countries regarding the ideas for building join European army. Thus, it is justifiable to ask a question about the validity of building European armed forces and to seek answers to what is actually hidden behind the expression “European army”. Perhaps, there is no need to create another structure, which will be ineffective in the scope of threats that EU is currently facing and threats that it will be facing in the future. Perhaps, it will be sufficient to deepen cooperation between Member States using the existing tools in the field of security and defence. On the other hand, maybe the creation of a common European army will be an impulse that will lead EU to autonomy in the field of security and defence.

## 2. Acceleration of Activities in the Framework of Common Security and Defence Policy

EU's security and defence policy has been developed since the 90s of the last century. Since the Treaty of Lisbon has entered into force in 2009, it has been known as the Common Security and Defence Policy (CSDP). In the initial period, no significant actions were undertaken in order to develop the CSDP, despite the political and institutional development potential contained in the treaty provisions. Previous EU's activity in the context of security and defence was mainly focused on crisis management, based on the civilian and military capabilities of the Member States. Lack of own command structures and failure to use the potential of European rapid reaction forces (battlegroups) in crisis management contributed to the emergence of opinions regarding ineffectiveness of EU's actions in the field of defence and security, despite the fact that it implemented low-intensity operations in its immediate vicinity (Kaňa, Mynarzová, 2016).

2016 should be recognized as a crucial year in the context of development acceleration of the CSDP, aimed at creation of the European Defence Union, in which three major factors influenced the current activities associated with development of the EU's defence capabilities. These include: the referendum deciding on the United Kingdom's exit from the EU, the victory of Donald Trump in the American presidential election, which increased the uncertainty about Euro-Atlantic relations, and the adoption of *A Global Strategy for the European Union's Foreign And Security Policy (Shared Vision, Common Action: A Stronger Europe)* by the European Council.

Results of the referendum deciding on the United Kingdom's exit from the EU became an impulse for closer cooperation between Germany and France, especially in the field of defence, which was recognized by both countries as one of the three areas of deepening European integration. Paradoxically, Brexit may be considered to be a factor positively influencing the development of CSDP, because there is no longer a country within the EU that would inhibit the integration in the field of security and defence, and due to that fact the institutional strengthening of the CSDP is possible. However, it is necessary to note that defence capabilities of the United Kingdom must be compensated within the EU (Miszczak, 2017).

The second factor that accelerated the work of Europeans on defence policy was the U.S. presidential election won by Donald Trump. Until now, the Euro-Atlantic ties were a natural element of foreign policy, including the defence alliance, for the subsequent presidents of the United States. President Trump, during the election campaign, did not articulate this in a clear and obvious way, instructing the European elites about building defence capabilities on their own and about increasing defence spending. His words about the "obsolete NATO", spoken during election rally in the state of Wisconsin (The New York Times [online], 2016), must have caused concern among European allies, especially those from the eastern flank of NATO. This approach provoked discussions among European allies about becoming independent of United States in the area of defence capabilities, including the creation of new structures. In other words, based on anti-American public opinion in Western Europe, a mobilization occurred in the scope of development of the EU's defence policy. On the other hand, there is a visible uncertainty of some EU countries regarding the actual further commitment of the United States in the scope of ensuring security for Europe.

The third factor, which provided and provides legal framework associated with the EU's defence policy, refers to the adoption of *A Global Strategy for the European Union's Foreign And Security Policy* by the European Council in June 2016, which was prepared by the High Representative for Foreign Affairs and Security Policy – Federica Mogherini.

Failure associated with the implementation of previous security strategy from 2003 (European Council [online], 2009) resulted in the fact that the provisions of current strategy are less ambitious and more pragmatic. This document, which determines objectives and ambitions of the EU in the scope of security and foreign policy, focuses on the implementation of more realistic and pragmatic objectives mainly associated with security of the Member States.

Greater contribution to the European security should be expressed in five types of activities: security and defence, anti-terrorism, cyber security, energy security and strategic communication (information security). The North Atlantic Alliance is indicated as a collective instrument and guarantor of security of the Member States, with which the EU will closely cooperate. At the same time, the EU must deepen its cooperation with NATO, while maintaining the decision-making autonomy of both organizations. As for the other areas, all of them remain significant: in the shorter perspective – anti-terrorist activities are crucial, while in the longer perspective – cyber security is essential. In the scope of energy security, the EU could be a very effective strategic entity, but in practice it still does not play such a role. In the context of information security, the EU is losing the confrontation with Russia within new hybrid cold war (European Union External Actions Service [online], 2016).

It is also in the EU's interest to invest in vitality (endurance), i.e. sustainable stability of countries and societies in the east – to Central Asia, and in the south – to Central Africa, which is understood as the ability of countries and societies to reform themselves, including overcoming and reconstructing after crises. Important factors that increase strategic vitality of the EU's surroundings include expansion policy, neighbourhood policy and migration policy. In accordance with provisions of the EU's global strategy, it will invest in prevention, resolution and stabilization, avoiding premature exclusion from operations, when a new crisis breaks out somewhere. The EU will also support the building of regional systems of international order, also in the most disorganized and fragmented areas (European Union External Actions Service [online], 2016).

In a geographical context, the global strategy focuses on the extended region, which covers Eastern Europe with its Central Asian extension, as well as the Mediterranean and Central African areas. Thus, the EU no longer has the ambition of being a global actor in the structures of international order. Moreover, the document determines specific scenarios and perceptions of threats, which include change in the context of European security, caused by the aggression of Russian Federation against Ukraine. The Russian violation of international law and the illegality of annexation of the Crimean peninsula is clearly emphasized (European Union External Actions Service [online], 2016). The strategy also articulates other threats associated with the Russian activity: disinformation activities associated with military threats and hybrid activities aimed at internal political methods of destabilizing other countries. It also refers to previous threats, such as transnational terrorism and those threats that more and more clearly can destabilize individual countries – related to cyber security and energy security, organized crime or climate change. The strategy emphasizes that EU's internal security is directly linked to the external security, hence the fight against terrorism or proper migration policy may be crucial. This document very strongly articulates that the Member States must provide each other with support, as well as solidarity, and that assumptions of the strategy must be actively implemented, including the strengthening of structural cooperation of the states (Koziej, 2017).

Analysis of provisions of the EU's global strategy begs the question, whether this subject document includes any references to the need to create a European armed forces, which would be a tool to counteract the identified threats. It turns out that there are no direct references. Nevertheless, the nature of identified threats (at least some of them) and the need to implement the objectives of the European global strategy lead to the ascertainment that the EU must have



appropriate capabilities in this regard. Undoubtedly, some of them include capabilities in the field of security and defence, however it does not mean that there is a need to create common European armed forces.

### **3. Initiatives Contributing to a Common European Armed Forces**

European Community's activities associated with the acceleration of CSDP development should be linked to the meeting of EU leaders in Bratislava in September 2016, because they provided a formal impulse for the working out of specific decisions by Member States and the European Commission. During the informal summit of 27 Member States, a plan was adopted, which announced that one of the EU's priorities for the coming months will be strengthening of EU's cooperation in the field of external security and defence (European Council [online], 2016). Directions of development of the EU's security and defence policy, adopted by the European Council in December 2016, are based on the EU's global strategy and they focus on three strategic priorities: responding to external crises and conflicts, building capabilities of the partners, and protecting the EU and its citizens (European Council. *European Council meeting...* [online], 2016). Annual works resulted in initiatives in six key areas, which in the future may lead to the creation of a European Defence Union, and they certainly create a new quality of CSDP.

In the area of improvement of crisis management structures, the Military Planning and Conduct Capability (MPCC) was established, which has the purpose of improving the functioning of EU's crisis management structures. MPCC will function within the European Union Military Staff, which is a part of the European External Action Service, and it will be responsible for coordination of currently conducted training operations in Mali, Somalia and Central African Republic (European Union External Actions [online], 2017).

In the area of strengthening the EU's rapid response instruments, it was agreed that the Member States will jointly finance the use of battlegroups. The main source of financing, which will be implemented centrally, will be the Athena mechanism. The European Union battlegroups constitute rapid reaction forces, but in practice they have never been deployed in order to solve any crisis. The problems of political, technical and financial nature always stand in the way. Athena is a mechanism for financing common costs associated with the EU's military operations conducted under the CSDP (European Council [online], 2015). It is possible to finance the common costs of EU's military operations and the costs of individual countries, including accommodation, fuel and analogous expenses associated with the national contingents.

In the area of expansion of the military capabilities, coordination activities were undertaken in the form of introduction of the Coordinated Annual Review on Defence (CARD) mechanism. This will allow to achieve a better orientation at the EU level regarding spending, national investments and research in the field of defence (European Defence Agency [online], 2017). Consequently, it will increase transparency and it will politically articulate European defence capabilities. Whereas in the substantive context, it will allow to properly estimate shortages and it will enable deeper defence cooperation, as well as more coherent approach to the planning of defence spending, which are currently in the domain of individual Member States.

In the area of military-technical cooperation, which so far should be recognized as unsatisfactory, the breakthrough decision was establishment of the European Defence Fund (EDF) in June 2017, which will probably accelerate the integration processes in the scope of spending used for armament purchases (European Commission [online], 2017). This fund should help the Member States to cooperate, as well as develop and acquire key defence

capabilities. European decision-makers do not hide the fact that EDF's objective is also to become independent of the U.S. military capabilities and thus increase strategic autonomy. The key priorities include: unmanned aircraft systems, in-flight refuelling, satellite communication and cyberspace capabilities. Without going into the mechanisms of EDF's operation, it should be pointed out that it may be an opportunity for the development of modern technologies, which will result in specific military capabilities in the future.

In the context of creation of a common European army, it is necessary to recognize the decision made on 11 December 2017 regarding establishment of the Permanent Structured Cooperation (PESCO) as crucial. Such possibility is provided by art. 42, section 6 and art. 46 of the Treaty on European Union and Protocol No. 10 on permanent structured cooperation (European Union External Actions Service. *Permanent...* [online], 2017). It provides for close cooperation of a group of the Member States in the field of security and defence. A fixed framework of cooperation will allow Member States, which have the will and capabilities, to jointly develop defence capabilities, invest in the same projects and increase contribution and operational readiness of their armed forces. PESCO is supposed to be correlated with the activities undertaken within CARD and EDF. The possibility of acquiring critical capabilities, uniform for all EU Member States is indicated, and thus acquiring a common type of armaments and military equipment (e.g. European unmanned aircraft systems, ships, tanks, etc.). Consequently, it would enable the development of joint formations of the land forces, naval forces or air forces (Koziej, 2018).

#### **4. Arguments for and Against a European Army**

The above-mentioned initiatives provide a new impulse for development of the EU's defence capabilities and as a consequence – also for the creation of a European armed forces. The initiative to create a European army has its supporters, as well as opponents. The basic argument in favour of the creation of EU armed forces is the deepening of integration between Member States in the field of defence. It should be emphasized that despite legal possibilities, the defence domain has never been a priority in the context of European integration. Consequently, the building of defence capabilities, among others through the establishment of European army, is supposed to contribute to becoming independent of the United States, and thus it is supposed to contribute to strategic autonomy of the EU (Demetriou, 2016). Proponents of the establishment of common European armed forces also point to the fact that the EU will gain capabilities in the “hard power” area, which it has not had so far, despite the functioning (theoretically) of battlegroups or rapid reaction forces. Thus, the EU's role in the international arena may increase in the context of involvement in solving difficult crisis situations or even conflicts. As positive, in the context of the above-mentioned initiative, should be also recognized the improvement of cooperation between Member States, which may be a way to reduce the costs of maintaining units or introducing new types of armaments. On the other hand, it is worth to mention that concepts associated with international cooperation and sharing of capabilities already function in the EU, e.g. Pooling & Sharing initiative, bilateral and multilateral agreements between European partners in the scope of defence. Enthusiasts of the creation of European army also maintain that its capabilities would be complementary in relation to the North Atlantic Alliance and this would allow to alleviate the burden of NATO. At the same time, they indicate that European armed forces should take care of the protection of EU's borders, thus narrowing the scope of possible involvement (Faleg, 2017).

However, in the public debate, the prevailing views articulate doubts or even negate the need to create a European army. Firstly, such views indicate that there is no political will of all EU

Member States. This results from the diverse perception of security sphere in the EU itself. For example, European army seen through the eyes of the eastern flank states is another tool ensuring collective defence. On the other hand, the south of Europe perceives this initiative as a tool that will stop migration and stabilize African countries. The caution of NATO's eastern flank countries primarily results from the concerns associated with duplication of efforts related to the maintenance and development of specific military capabilities, which in consequence may lead to a weakening of the Euro-Atlantic ties and NATO itself. These countries point to the fact that EU's engagement, resulting from provisions of the global strategy, is still mainly focused on crisis management. Thus, these countries are afraid that collective defence may be put aside. Consequently, initiatives and programs associated with the development and building of capabilities will not focus on real defence capabilities of the countries, preferring the "soft" skills (Gotkowska, 2017). In other words, EU Member States are too divided to speak with one voice on such a sensitive issue as military operations. At the same time, the deepened integration of selected states forming the core of defence may contribute to the functioning of many defence speeds in the EU, which in itself will be unfavourable.

It also seems that the value of EU's military power would not be heavy; such an army would be too small to play a serious role. Experiences from Libya have shown that even such militarily significant countries as France and United Kingdom are unable to carry out a large operation without incurring major costs by the United States (Zieliński, 2014).

There are also doubts regarding unclear financing issues of the subject initiative. EU armed forces would be probably expensive and would require large amount of resources in order to form, equip and maintain them. In the situation of insufficient defence spending in the entire Europe, this would be carried out at the expense of national armies that can be used in NATO operations.

The biggest concerns regarding the ideas of European army result from the lack of clarity about the scheme of making political decisions concerning its use. As is known, European institutions exhibit a trend of exerting open pressure on individual states and deciding against the will of some of them, e.g. by majority voting, which was evident during the migration crisis. Similar questions appear in the context of command of European armed forces, i.e. questions about the effectiveness (political and military) of managing such new creation, especially taking into account that Member States are reluctant to delegate the right to make decisions about using their own armed forces to other organs.

## **5. Conclusion**

There is no doubt that any attempt to tighten military cooperation in Europe is worth considering. This also applies to the possible creation of European armed forces. However, it requires a systemic approach based on strategic goals of functioning of the European Union, including in the area of defence. Appearing concerns of individual countries regarding their sovereignty, lack of mutual trust, as well as technical and bureaucratic obstacles in the EU have negative impact on integration processes in the area of building defence capabilities. It seems that striving to achieve strategic autonomy of the European Union in the field of defence requires resolving of several key issues. Firstly, it is necessary to develop EU's catalogue of threats, which will be just as important for the eastern flank states as for the southern flank states and other Member States. Various perception of security in the European Union is not conducive to building EU's defence capabilities. Secondly, it is necessary to harmonize defence planning and development of EU's defence capabilities. It must be clearly emphasized that it should be carried out in a complementary manner in relation to the North Atlantic

Alliance, in order to not to duplicate efforts in this area. Thirdly, the potential contained in bilateral and multilateral cooperation between Member States in the field of defence must be activated to a greater extent. Fourthly, it is necessary to implement mechanisms that will improve decision-making process at the strategic level and it's also necessary to strengthen direct cooperation with the North Atlantic Alliance.

It seems that the desired direction of changes should be the further tightening of military and industrial cooperation, including the creation of command structures, joint units or realistic standards of interoperability. However, in the author's opinion, it should not be equivalent to the subordination of national forces to European institutions. The format of close cooperation, without giving away the control over even a part of the national armed forces, provides greater possibilities of cooperation with non-EU countries, including United Kingdom or United States. Undoubtedly, the groundbreaking decisions that have been made by the European community in 2017 in the scope of defence accommodate the above-mentioned observations. Special attention should be paid to the initiatives of PESCO and EDF, which are an opportunity for real strengthening of combat capabilities, especially in the cases, in which the majority of EU countries are too weak individually. Also, it should be added that NATO, differently than in the past, favourably refers to the EU defence integration, believing that in its present form it is not a competition and it can bring benefits (Smith, Gebhard, 2017). Primarily, through better spending and non-duplication of military capabilities, as well as through activity in places, in which both NATO and USA usually do not get involved.

To sum up, the deepening of cooperation in the field of defence between EU states is necessary. However, it should be implemented with respect to the sovereignty of individual states and taking into account their real capabilities, in order to avoid the functioning of Europe of many speeds in the scope of security and defence.

## References

- [1] Demetriou, P. (2016). NATO & CSDP: Can the EU afford to go solo?. *Cogent Social Sciences*, 2(1), 1208376. <https://doi.org/10.1080/23311886.2016.1208376>.
- [2] European Commission (2017). *A European Defence Fund: €5.5 billion per year to boost Europe's defence capabilities* [online]. [cit.2018-02-22]. Available at: [http://europa.eu/rapid/press-release\\_IP-17-1508\\_en.htm](http://europa.eu/rapid/press-release_IP-17-1508_en.htm).
- [3] European Council (2009). *European Security Strategy. A secure Europe in a better world* [online]. [cit.2018-02-22]. Available at: <http://www.consilium.europa.eu/media/30823/qc7809568enc.pdf>.
- [4] European Council (2015). *Athena – financing security and defence military operations* [online]. [cit.2018-02-22]. Available at: <http://www.consilium.europa.eu/en/policies/athena/>.
- [5] European Council (2016). *Bratislava Declaration and Roadmap* [online]. [cit.2018-02-22]. Available at: <http://www.consilium.europa.eu/en/policies/eu-future-reflection/bratislava-declaration-and-roadmap/>.
- [6] European Council (2016). *European Council meeting (15 December 2016) – Conclusions* [online]. [cit.2018-02-22]. Available at: <https://www.consilium.europa.eu/media/21929/15-euco-conclusions-final.pdf>.

- [7] European Defence Agency (2017). *Coordinated Annual Review on Defence (CARD)* [online]. [cit.2018-02-22]. Available at: [https://www.eda.europa.eu/what-we-do/our-current-priorities/coordinated-annual-review-on-defence-\(card\)](https://www.eda.europa.eu/what-we-do/our-current-priorities/coordinated-annual-review-on-defence-(card)).
- [8] European Union External Actions Service (2016). *A Global Strategy for the European Union's Foreign And Security Policy. Shared Vision, Common Action: A Stronger Europe* [online]. [cit.2018-02-22]. Available at: [https://eeas.europa.eu/archives/docs/top\\_stories/pdf/eugs\\_review\\_web.pdf](https://eeas.europa.eu/archives/docs/top_stories/pdf/eugs_review_web.pdf).
- [9] European Union External Actions Service (2017). *Permanent Structured Cooperation (PESCO) – Factsheet* [online]. [cit.2018-02-22]. Available at: [https://eeas.europa.eu/headquarters/headquarters-homepage/34226/permanent-structured-cooperation-pesco-factsheet\\_en](https://eeas.europa.eu/headquarters/headquarters-homepage/34226/permanent-structured-cooperation-pesco-factsheet_en).
- [10] European Union External Actions Service (2017). *The Military Planning and Conduct Capability – MPCC* [online]. [cit.2018-02-22]. Available at: [https://eeas.europa.eu/sites/eeas/files/mpcc\\_factsheet.pdf](https://eeas.europa.eu/sites/eeas/files/mpcc_factsheet.pdf).
- [11] Faleg, G. (2017). *The EU's Common Security and Defence Policy*. London: Palgrave Macmillan.
- [12] Gotkowska, J. (2017). *Renesans wspólnej polityki bezpieczeństwa i obrony UE. Szanse i wyzwania dla wschodniej flanki* [online]. [cit.2018-02-22]. Available at: [https://www.osw.waw.pl/sites/default/files/komentarze\\_243.pdf](https://www.osw.waw.pl/sites/default/files/komentarze_243.pdf).
- [13] Kaňa, R. and Mynarzová, M. (2016). Common Security and Defence Policy of European Union in Light of Contemporary Security Threats. In Kovářová, E., L. Melecký and M. Staničková (eds.). *Proceedings of the 3rd International Conference on European Integration 2016*. Ostrava: VŠB-TU Ostrava, pp. 425–433.
- [14] Koziej, S. (2017). Strategia globalna UE: szanse i dalsze wyzwania wdrożeniowe. *Policy Papers. Komentarz Międzynarodowy Pułaskiego*. Fundacja im. Kazimierza Pułaskiego: Pułaski Policy Papers.
- [15] Koziej, S. (2018). Polityka Bezpieczeństwa i Obrony Unii Europejskiej: od Strategii Globalnej do PESCO. *Policy Papers. Komentarz Międzynarodowy Pułaskiego No 1*. Fundacja im. Kazimierza Pułaskiego: Pułaski Policy Papers.
- [16] Miszczak, K. (2017). Przyszłość polityki bezpieczeństwa i obrony Unii Europejskiej. *Krakowskie Studia Międzynarodowe*, vol. 1, iss. XIV, pp. 53–68.
- [17] Smith, S. J. and Gebhard, C. (2017). EU–NATO relations: running on the fumes of informed deconfliction. *European Security*, 26:3, 303-314, DOI: 10.1080/09662839.2017.1352581.
- [18] The New York Times (2016). *Donald Trump Says NATO is 'Obsolete,' UN is 'Political Game* [online]. [cit.2018-02-22]. Available at: <https://www.nytimes.com/politics/first-draft/2016/04/02/donald-trump-tells-crowd-hed-be-fine-if-nato-broke-up/>.
- [19] Whitman, R.G. (2017). The UK and EU Foreign and Security Policy: An Optional Extra. *Political Quarterly*, 87 (2), pp. 254-261.
- [20] Zieliński, T. (2014). *Powietrzny wymiar działań bojowych w Libii (2011). Operacja Odysej Dawn i Unified Protector*. Poznań: Silva Rerum.

## Evaluation of the Excellence of Companies in Europe by Applying the EFQM Model

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### **Abstract**

*The key features of current global developments in international markets include an increasingly challenging competitive business environment in which effective positioning of companies becomes one of the preconditions for achieving and sustaining a long-term competitive advantage, thereby application of principles of excellence in business strategies of companies is a necessity. The paper will be focused on the review of the scientific theoretical background of the issue of achieving excellence, on the analysis of the EFQM model as an internationally recognized, universal and most widely used tool for achieving and simultaneously evaluating Business Excellence in EU countries in comparison with other European countries. The paper will be also focused on comparison of EFQM award winners in Slovakia and the Czech Republic.*

**Keywords:** *application of the EFQM excellence model in the EU, business excellence, competitiveness*

**JEL Classification:** *D21, F47, L21*

### **1. Introduction**

The current changes in the market environment are so quick and fundamental, that the earlier proven management methods are very quickly outdated and replaced by newer – more innovative ones. The influence of globalization, openness of the European market and increasing competitive pressures cause in enterprises need to streamline a number of processes as national or territorial views on achieving success of companies' are no longer sufficient (Čemerková, 2016). From the perspective of strengthening competitiveness and growth within the global impacts of business activity (Adámek, 2016), companies must acquire and apply entirely new approaches to mobilizing their tangible and intangible assets. Therefore, business success in international perceptions these days depends on the effectiveness of the system of management and on application of the principles of exceptionality – excellence in it. The goal is to get ahead of the competition and to achieve by this a significant competitive advantage in the markets. It is a search for new market opportunities, an effort to achieve higher economic effects through innovative steps used in business strategies. From this point of view, it is clear that businesses which want to challenge the new conditions and create an advantageous position in a globalized world for itself should fundamentally change their perceptions of business, as the pursuit for the new business concepts is no longer an option, but it is necessity now.

Based on theoretical views on possibilities of achieving the exceptionality of companies by increasing the overall efficiency of their business up to the highest level of excellence, the aim

of this scientific paper is to identify internationally recognized and in individual European countries accepted ways of assessment of the quality of business strategies. At the same time, the goal is to analyze the established Business Excellence evaluation standards by applying the EFQM model in European countries, focusing on EU member states and the ways of assessing company exceptionality as well as the results of these assessments in case of firms operating in the Czech Republic and the Slovak Republic.

### ***1.1 Theoretical Basis of Achieving Company Exceptionality – Business Excellence***

According to Porter, L. J. and Tanner, S. J., the assessment of Business Excellence status or business exceptionality is an essential part of learning and measurement of process which enables organizations to identify strengths and opportunities for improvement while developing cutting-edge programs which are monitored in an arranged way. Self-assessment is a complex, systematic and regular assessment of the organization's activities. These types of business or organizational assessment are one of the most powerful tools available (Porter, Tanner, 2004).

Peters, T. and Austin, N. perceive excellence as a result of the following critical factors of success (Dahlgard-Park, Dahlgard, 2006): implementing people – employees; permanent customer care; continual introducing of innovation; management – supervision that combines the above mentioned 3 factors (employees, customers, innovations) at all levels of the organization.

Slovenian authors Štok, Z. M. ; Markič, M. ; Bertoneclj, A. ; Meško, M. define excellence as improving quality. They perceive the excellence as a high quality, even as the highest possible quality. According to their views, excellence is a stimulus and a driving force of development, quality and personal, collective and organizational growth. It is an intense activity that reflects in the behavior of each team member which achieves excellent results. Excellence is formed gradually, thanks to mental well-being and harmony. (Štok et al [online], 2010).

Croatian economists Pozega, Z.; Crnkovic, B. and Udovicic, A. are of the opinion that Business Excellence represents a high standard of quality at all levels of the organization. As a truly exceptional organizations they consider those which have adopted the Business Excellence concept as an important tool for future development and have perceived quality as an integral part of the whole organization. Business success is defined and measured by various qualitative and quantitative indicators, BE being a form of qualitative measurement of organizational success. This concept is defined by the principles of focusing on results, paying attention to the customer, employee development, continual education process, introduction of innovations, development of business partnership relations and corporate social responsibility. A number of successful organizations have already adopted the concept of quality achievement and evaluation, and have also been awarded by commissions which evaluate compliance with nationally and internationally recognized Business Excellence models. The above-mentioned Croatian authors consider Business Excellence as the most powerful tool for achieving competitive advantage for companies, while overall quality management is the way to ensure the boost of excellent results which are recognized by many world companies. The basic idea of BE's approach is that quality can not be focused solely on products and services. Quality has to be incorporated into the management of its overall business strategy and should be a core value for all management processes (Pozega, Crnkovic, Udovicic [online], 2014).

Zorkóciová, O. and Ďuranová, L. state that the achievement of the level of excellence of companies is associated with the ability to use the creative talents of managerial thinking. They perceive the excellence as ability of a company to generate profits while meeting the high

requirements of consumers. It means the realization of proper activities, at the right time, with the aim of ensuring long-lasting intentions of the organization (Zorkóciová, Ďuranová, 2015).

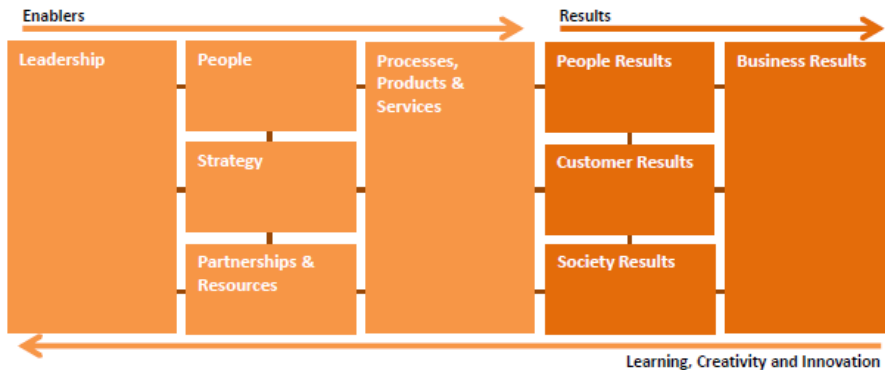
Nowadays, businesses face growing demands in the area of improvement of their performance and quality of their products. If businesses want to succeed in the markets with strong competitive pressure, they have to focus their attention on reaching the status of so-called excellence. One of the possible ways to achieve this status is constant – permanent introduction of innovations, which Jankal, R. emphasizes in his work. It is not just product innovations, but also innovations of business processes, marketing and organizational innovations, innovations in the field of human resources management, and so on. Constantly increasing customer requirements for products quality can be characterized by favoring innovations, stylish products which are sold at an affordable price and at the same time they are available on the market, products which are carriers of technological, economic and social progress (Jankal [online], 2014)

## **2. EFQM Excellence Model (Problem Formulation and Methodology)**

As has already been mentioned, the European companies operate in increasingly difficult and complicated conditions of development, such as dynamic processes of globalization, complexity and intensity of environment, new requirements and competitive intensity of competition (Barcik, 2016). The basic prerequisite for achieving and maintaining long-lasting competitiveness lies in the efficiency of business processes, with the international aspect of company success depends on the optimization of managerial guidance and the introduction of excellence in it. Practical and effective tools for achieving and assessing excellence today are excellence models that are involved in the constant development of all business processes in terms of the direction of corporate goals so as to ensure their continuous improvement and growth of competitiveness. The qualitative streamlining of management processes is covered in Europe by excellence model EFQM created by European Foundation for Quality Management (EFQM). The EFQM model is a managerial tool for increasing the competitiveness and performance of organizations. It serves to voluntary comparison of the nine criteria framework which can be implemented by any organization without distinction. In a simple way, it points to the tools and resources that management has at its disposal, making it easier to decide of using these resources to increase business efficiency. The EFQM excellence model points to the relevance of the relationship between the results and the sources and the comprehensive understanding of the interconnection of all the criteria of the organization.

The EFQM model deals with nine basic areas, which represent the main criteria for self-assessment. The first five of them assess the resources and tools the organization has at its disposal (leadership, policy and strategy, staff, partnerships and resources, and processes).



**Figure 1: The Structure of the EFQM Excellence Model**

Source: elaborated by authors according to EFQM [online], 2012

At first glance at the EFQM excellence model it is not visible that it allows to find resources to increase organization's performance, so it is recommended to evaluate individual criteria and the state of the organization. Although self-assessment may appear to be a simple and inexpensive alternative of an external evaluation of a company, it is a demanding process.

#### **Criteria of requirements (Zorkóciová, Škodová, Petriková, 2017)**

**Leadership:** The main subject of this criterion is of conceptual role of business leadership, which consists of two moments: development tendencies which are clearly defined by company leadership (politics, mission, vision, code of ethics, etc.); business leadership encourages and motivates all employees to achieve the set goals of the company. Management of change across the organization is implemented through a structured and systematic way and includes employee behavior that is linked to the company's values, policy, and interests.

**Strategy:** The essence of this criterion is to deal with the way of implementation of mission and vision through a clearly defined strategy of interested parties and with support of relevant policies, plans, tasks, goals and processes.

**Staff (people):** Based on this criterion, the way of organization's management, development and providing access to knowledge is identified. It allows a more detailed perception of workers' potential (individual, team and company level) and of activities supporting the planning process of the effectiveness of own policy, strategy and processes.

**Partnerships and resources:** The purpose of this criterion is to support policy, strategy, and processes efficiency by planning and managing the company's internal resources. It also assesses the extent to which the company manages its resources efficiently and effectively.

**Processes, products and services:** Past experience confirms that all activities in a company must follow certain sequence from the beginning to the end of its course. Individual processes are assigned to their keepers, and their improvement is based on the active day-to-day involvement of all employees to satisfy and provide higher value to customers and to other interested parties. The work of management is effective when there is continuous measurement and feedback, which provides benefits in relation to the mission of the organization.

**Results criteria (Mad'arová, 2007)**

*Results in relation to customers:* An integral part of all businesses is the direct measurement of their customers' satisfaction, including their loyalty, overall image, sales support, products and services.

*Results in relation to workers:* The important role of all businesses is to record the results in relation to employees which are concerned with their motivation, engagement and with satisfaction in the company. These are, above all, the conditions of career development and personal skills as well as the conditions of their employment, remuneration, or work environment.

*Results in relation to the company:* Through this criterion more detailed information are determined about company's perception of the quality of life, the environment, the protection of global resources, and the use of internal indicators of business effectiveness. Equally important is mutual communication with authorities and bodies that perform the regulatory function.

*Key results:* They represent what the business achieves compared to the planned performance. Based on the purpose and objectives of the organization, some measurements included in key performance outputs (financial or non-financial outputs) can be applied to critical performance indicators. They may also be related to key processes parameters in a company (e.g. market share, productivity, production cycle, time of response to a demand, accessibility of information, failure rate, innovation rate, patents, licenses, etc.). Each criterion is further subdivided into several of sub-criteria which are assessed in selected excellence models with the aim to improve performance and increase the competitiveness of companies.

In the next part of the paper, we analyze the use of an internationally recognized EFQM model in comparison to other models or approaches to evaluation of achieving of company excellence in EU Member States as well as in other European countries, and the entities competent to carry out these processes. We also will focus on evaluating the achievement of the highest degree of excellence by applying the EFQM model through comparison of companies operating in the Czech Republic and the Slovak Republic.

**3. Application of the EFQM Excellence Model in the EU, Focusing on the Czech Republic and the Slovak Republic (Problem Solution)**

The way to assess the achievement of business excellence varies from country to country. The reason is the possibility of applying different models and approaches, which are often based on differences in culture, economy, recognized values, standards, managerial approaches, and so on.

An analysis of the company's excellence assessment shows that all EU Member States except Bulgaria, Cyprus, Croatia and Malta are using internationally recognized excellence models in this process.

The EFQM model is thus applied by a large majority of EU countries, but some of them also use other models of excellence assessment, e.g. Hungary applies the EFQM model and the national model based on the Deming Prize. They are a different awards covered by different organizations. In Poland, companies can apply for two different awards through the EFQM model. Ireland favors the EFQM model as a valuation tool along with the national model based on the Baldrige model, but they are two different prizes. Constituent countries of the United Kingdom, such as Northern Ireland, Scotland and Wales use the EFQM model. In Sweden, it is possible to apply up to 3 models, namely EFQM, Baldrige and the national model, but

companies run for the same one award. Greece uses its national model and national model based on EFQM to try to achieve various awards covered by different organizations. Spain and Luxembourg prefer their national model, so do Slovakia, France and the Netherlands, but the basis of this national model is the EFQM model.

Countries that are not members of the EU, such as Russia, Ukraine and Switzerland, use EFQM models as well, while Norway and Iceland have national models. The difference is only that the Norwegian model is based on the EFQM model and in the case of Iceland this model is based on combination of the EFQM and the Baldrige model.

A specific case is the island of Aruba, the Caribbean island, which belongs to the Kingdom of the Netherlands, but is geographically located in Latin America. As Aruba uses the national model based on the Baldrige model (typical for the US), it can be said that the geographic aspect prevails in this case (Nist [online], 2010).

The National Quality Award is the highest award which can be achieved by organizations in the Slovak Republic (since 2000) and in the Czech Republic (since 1995) in the area of quality management systems. The main goal of the National Quality Award is to start a journey to excellence, or path of innovations and improvement of all approaches (activities) of organizations in the 21st century. The award is based on the application of quality models which are used in similar competitions in other EU countries and outside the EU.

The National Quality Award is awarded in two segments – in business and public sector. While the evaluation in the business sector is based solely on the EFQM excellence model, in the public sector organizations can use both the EFQM model and the specific CAF model, a quality model for public administration organizations. The Czech Republic, in addition to the Excellence Program (based on the EFQM model) and the CAF program, uses in both sectors also simplified versions of the EFQM Excellence Model, namely Start, Start Europe and Start Plus.

In our paper, within the EU we focus on the evaluation of corporate excellence in the Slovak Republic and the Czech Republic. The basis of the comparative framework for these countries is EFQM excellence model, which shows slight differences in the given evaluation procedures (table 1).

**Table 1: Excellence Model and its Degrees of Appreciation in the Slovak Republic and the Czech Republic**

Slovakia –EFQM Excellence model		Czech Republic – Excellence Program (EFQM)	
200 – 300 points (p)	Appreciation for participation of the organisation in the competition	200 – 299 p	Perspective organization
301 – 400 points	Appreciation for improving organization performance	300 – 399 p	Successful organization
401 and more p	Award-winning finalist	over 400 p	Excellent organization Recognition for excellence (4 to 5*)
Minimally 450 p	National Award Winner		

Source: elaborated by authors according to Únms [online], 2018 and Sok [online], 2016

In the following table, we list the winners with the highest business excellence awards in the Slovak Republic and in the Czech Republic in 2014 – 2017 (data for 2017 are not officially available in the Czech Republic). In order to compare the achieved results in the area of business excellence evaluation in the Slovak Republic and the Czech Republic, due to a partially different methodology, we will compare „National Award winner“ in the Slovak Republic with „Excellent organizations with 5\*“ in the Czech Republic and with an „award-winning finalist“ level in the Slovak Republic we will compare „excellent organizations with 4\*“ in the Czech Republic.

**Table 2: Awarded Companies Based on the EFQM Excellence Model in 2014 – 2017**

Year	Slovakia	Czech Republic
	<b>National Award Winners:</b>	<b>Excellent organizations (Recognition for excellence 5*):</b>
2014	HANIL E-HWA AUTOMOTIVE SLOVAKIA (BS)	Hyundai Motor Manufacturing Czech (BS)
	I.TRAN (BS)	AHOLD Czech Republic (PS)
	Social service facility (Sunny house) (PS)	Secondary vocational school of Multimedia and Promotion (PS)
2015	Slovak Information and Marketing Company (BS)	AHOLD Czech Republic (PS)
	Faculty of mechanical engineering – Technical University of Košice (PS)	
2016	Kia Motors Slovakia (BS)	Miele technology (BS)
2017		Data is not available
<b>Year</b>	<b>Award-winning finalists</b>	<b>Excellent organizations (Recognition for excellence 4*):</b>
2014	Faculty of Management Science and Informatics – University of Žilina (PS)	Liberec Region (PS)
2015	CEIT Biomedical Engineering (BS)	Kermi (BS)
		Faculty of Agriculture – University of South Bohemia in České Budejovice (PS)
2016		Kaufland Czech Republic (BS)
2017		Data is not available

Source: elaborated by authors according to Únms [online], 2018 and Sok [online], 2016  
 Explanatory notes: BS – Business sector, PS – Public sector

In 2014 and 2015, neither in Slovakia nor in the Czech Republic was awarded the title „Appreciation for improving organization performance“ or „Successful organization“. Eight organizations in the Czech Republic were in 2014 and 2015 in the program Start Plus, which is the simplified versions of the EFQM Excellence Model. In 2016 and 2017, no organization

applying EFQM model in Slovakia was awarded title „Appreciation for improving organization performance“, in the Czech Republic in 2016 the „successful organization“ became Population Protection Institute in Lázně Bohdaneč.

In 2014, only in the Czech Republic the public sector organization the Seniors' Home of Kdyně became a „prospective organization“. In 2015, the Hradec Králové Region was regarded as the „perspective organization“ in the Czech Republic. In 2016 and 2017, no organization in Slovakia was awarded an „Appreciation for participation of the organisation in the competition“ and no organization in the Czech Republic became „Perspective organization“ in 2016 (Únms [online], 2018 and Sok [online], 2016).

#### **4. Conclusion**

The principles of excellence extend the life-cycle of products through their constant improvement by using of cutting-edge technologies and by their innovations. The penetration to international markets, supported by the application of excellence in management, boosts the economic performance of enterprises and enhances their competitiveness. It reduces the cost of purchased inputs by actively involving a wider range of suppliers in the procurement and helps optimize corporate resources.

Based on an analysis of EFQM excellence model applications in European geographical area, it can be stated that it is most often used to assess the achievement of outstanding business results by companies not only in EU member countries, but also in general. The other forms or approaches in evaluation are only supportive and complementary to the model, and are used only to a very limited extent (whether it is the application of the most used model in the US – the Baldrige model, or the separate national models or assessment procedures). Also, in the Czech Republic and Slovakia, the basis for achieving and thus evaluating the level of company excellence is the EFQM model method, although, as we point out in our paper, we can identify slight differences in the procedures. There is, however, another question: to what extent the public – the end consumer – perceives the fact, if at all, that a firm has achieved a level of excellence. Or, this is reflected in the quality of products and services, and therefore probably in the interest of the public, but without awareness of achievements in Business Excellence. But this is already a subject for the analysis of another scientific paper.

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#### **References**

- [1] Adámek, P. (2016). Consequences of Corporate Social Responsibility Approach in Voluntary European and Global “Responsible” Initiatives. In International Conference on European Integration. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 19–27.
- [2] Barcik, A. (2016). Co-opetition of Enterprises in Terms of the European Competition Policy. In International Conference on European Integration. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 65–71.
- [3] Čermeková, Š. (2016). Analysis of Logistics Communication of SMEs with their Environs in the Region NUTS II: Case Study for Moravian Silesian Region. In

- International Conference on European Integration. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 125–132.
- [4] Dahlgaard-Park, S. M. and Dahlgaard, J. J. (2006). *In Search of Excellence – Past, Present and Future* [online]. [cit. 2018-02-14]. Available at: [https://www.iei.liu.se/q/filarkiv/phdcourses/1.119234/InSearchofExcellenceSMJJ\\_.pdf](https://www.iei.liu.se/q/filarkiv/phdcourses/1.119234/InSearchofExcellenceSMJJ_.pdf).
- [5] Efqm (2012). *EFQM Model – Model Criteria* [online]. [cit. 2018-02-16]. Available at: <http://www.efqm.org/efqm-model/model-criteria>.
- [6] Jankal, R. (2014). The role of innovation in the assessment of the excellence of enterprise subjects [online]. [cit. 2018-02-17]. Available at: <http://www.sciencedirect.com/science/article/pii/S1877042813051367>.
- [7] Maďarová, M. (2007). Európska nadácia pre kvalitu – EFQM Excellence model. *Manažment v teórii a praxi : Odborný časopis O Nových Trendoch V Manažmente*, vol. 3, iss. 4, pp. 73–78.
- [8] Nist (2010). *National Quality/Business Excellence Awards in different countries* [online]. [cit. 2018-02-10]. Available at: <http://www.bpir.com/images/d28-mus,%20national%20quality%20business%20excellence%20awards.pdf>.
- [9] Porter, L. J. and Tanner, S. J. (2004). *Assessing Business Excellence – A guide to business excellence and self-assessment*. Elsevier: Butterworth-Heinemann.
- [10] Pozega, Z. and Crnkovic, B. and Udovicic, A. (2014). Business excellence as a crucial component for organization competitiveness [online]. [cit. 2018-02-18]. Available at: [http://utmsjoe.mk/files/Vol.%205%20No.%202/2-6-Pozega-Crnkovic-Udovicic\(1\).pdf](http://utmsjoe.mk/files/Vol.%205%20No.%202/2-6-Pozega-Crnkovic-Udovicic(1).pdf).
- [11] Sok (2016). *Národná cena kvality ČR* [online]. [cit. 2018-02-]. Available at: <http://www.sokcr.cz/narodni-ceny/narodni-cena-kvality-cr>.
- [12] Štok, Z. et al. (2010). Elements of organizational culture leading to business excellence [online]. [cit. 2018-02-18]. Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2267313](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2267313).
- [13] Únms (2018). *Národná cena SR za kvalitu 2018* [online]. [cit. 2018-02-12]. Available at: <http://www.unms.sk/?narodna-cena-sr-za-kvalitu-2018>.
- [14] Zorkóciová, O. and Ďuranová, L. (2015). Business excellence ako inovatívny nástroj zvyšovania výkonnosti a konkurencieschopnosti organizácií. *Studia commercialia Bratislavensia : scientific journal of Faculty of Commerce, University of Economics in Bratislava*, vol. 7, iss. 29, pp. 123 – 138.
- [15] Zorkóciová, O. and Škodová, L. and Petriková, H. (2017). Selected models of excellence from the aspect of increasing the competitiveness of firms. *Ekonomika cestovného ruchu a podnikanie : vedecký časopis Obchodnej fakulty Ekonomickej univerzity v Bratislave*, vol. 9, iss. 1, pp.58–71.

# The Main Drivers of Innovation Performance External to the Firm. Evidence from the Visegrad Group Countries

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## **Abstract**

*Concerning the significance of innovation in enhancing competitiveness of the European Union (EU) it is important to explore how the main drivers of innovation performance external to the firm, differ between the EU countries. In this regard the special attention was put on the Visegrad Group countries (V4). In the study a multivariate analysis and zero unitarization methods were applied. These methods allowed to analysis the differences between V4 countries in terms of human resources, attractive research systems and innovation-friendly environment dimensions. The study was based on data from the European Innovation Scoreboard 2017. The time period was 2009–2015. The results reveal, among others, the necessity to strengthen the actions enhancing the level of the main drivers of innovation performance external to the firm in the Visegrad Group countries. Such action may result in enhancing competitiveness of the European Union and fostering European integration processes.*

**Keywords:** *competitiveness of the EU, innovation drivers, the Visegrad Group countries*

**JEL Classification:** *O30, R11, O52*

## **1. Introduction**

Enhancing competitiveness of countries, regions and firms is the priority of the European Union (EU), leading to sustainable and inclusive growth of the EU Member States and to intensification of European integration processes. In this respect, the importance is put on innovation as the key factor of economic growth. The significance of innovation in fostering competitiveness of countries, regions and firms has been widely argued in the economic literature (see, e.g., Coenen *et al.*, 2017; Fagerberg, 2017; Barca, 2009) and is particularly highlighted in endogenous growth theory and knowledge spillovers theory. Therefore, the crucial is creation appropriate condition for innovation (see, e.g., Acs *et al.*, 2016; European Commission, 2017). In this context, the substantial are innovation drivers external to the firm.

Regarding the above, it is very important to check how the main drivers of innovation performance external to the firm differ between the European Union countries. Here, the paper the special attention puts on the group of Central European states. Thus, the aim of this paper is to explore how the main drivers of innovation performance external to the firm differ between the Visegrad Group countries (V4).

In order to achieve its aim, the paper is based on theoretical analysis of the problem concerning on a related literature review. The empirical data used in the study were gathered from the European Innovation Scoreboard 2017 (EIS). The time period is 2009–2015.

The paper is structured as follows. First part takes a glance at the literature on the main drivers of innovation performance external to the firm and presents the methodology. The following part presents the results. Last part provides the conclusions.

This study presents new insight on understanding the issues connected with the main drivers of innovation performance external to the firm. Zero unitarization method and a multivariate analysis were applied in order to identify the differences between the Visegrad Group countries, in terms of the main drivers of innovation performance external to the firm.

## 2. Problem Formulation and Methodology

Following the current state of literature on economic growth, innovation stimulates competitiveness of countries, regions and firms (see, e.g., Fagerberg, 2017; Acs *et al.*, 2016; Coenen *et al.*, 2017). Based on endogenous growth theory and knowledge spillovers theory, innovation strengthens competitive advantage and economic growth of countries, regions and firms (see, e.g., Acs *et al.*, 2016). With respect to the rank of innovation in fostering competitiveness, the crucial is creation appropriate condition for innovations. Here, the role of country and regional policy is essential. In this regard, countries and regions should build backgrounds for innovation and develop the network between, among others, universities, institutional environment, research organisations and firms (Fritsch and Storey, 2014; Martin, 2006). Hence, achieved cooperation will enhance competitiveness of countries, regions and firms (Zygmunt A., 2017). Following this, the European Union put special attention on creation the conditions for an innovation ecosystem (European Commission, 2017) as the core of competitiveness and integration processes. In this context, the role of social, economic and territorial conditions of regions and combination of endogenous and exogenous indicators of development are emphasised (see, e.g., Barca, 2009; Melecký and Staníčková, 2014). Thus, innovation emerge when conditions are continuously enhanced. In this respect the European Union puts the special concern on innovation drivers external to the firm, with emphasis on human resources, attractive research systems and innovation-friendly environment.

Considering human resources, a number of theoretical and empirical studies highlights their significance in competitive advantage of countries, regions and firms (see, e.g., Florida, 2014; Fritsch and Storey, 2014). Here, a wide body of empirical literature assessing the role of human resources formation (see, e.g., Coenen *et al.*, 2017). In this regard, the amount and structure of human capital is essential (Zygmunt J., 2017). Thus, human capital may impact, among others, on diversity management of firms (Maj, 2017) and their competitiveness. With respect to the importance of human resources as an innovation driver, the crucial is “the role of universities in building human capital” (Huggins *et al.*, 2008). Hence, attractive research systems is emphasised. Following this, research system provides knowledge necessary for fostering innovation and is treated as an important driver of innovation (Huggins *et al.*, 2008). In this context, the substantial importance is put, among others, on academic research and scientific publications as the core of creation new knowledge (see, e.g., Acs *et al.*, 2016; Martin, 2006). According to a number of studies, innovation drivers external to the firm, focused also on innovation-friendly environment (see, e.g., Coenen *et al.*, 2017). Here, the essential for enhancing of innovation are broadband penetration (European Commission, 2017) and opportunity-driven entrepreneurship (Fritsch and Storey, 2014) as the link between competitiveness of firms and competitiveness of countries and regions.

The importance of innovation drivers in enhancing competitiveness of the European Union requires undertake studies how the main drivers of innovation performance external to the firm differ between the European Union countries. In this regard, special interest was put on the group of Central European states. Therefore, the following hypothesis was posed: despite



belonging to the same group, the Visegrad Group countries differ in terms of the main drivers of innovation performance external to the firm.

The data of this study were gathered from the last report of the European Innovation Scoreboard 2017 (European Commission, 2017). In relation to the main drivers of innovation performance external to the firm, the EIS contains three dimensions regarding to human resources, attractive research systems and innovation-friendly environment (with data available for 2009–2015). These dimensions and their eight specific indicators stay in accordance with endogenous growth theory and knowledge spillovers theory. The special attention was put on data concerning the Visegrad Group countries: the Czech Republic, Hungary, Poland and Slovakia. The time period was referring 2009–2015. The descriptive statistics of diagnostic variables, comprising mean, standard deviation, minimum and maximum are presented in Table 1.

**Table 1: Descriptive Statistics of Diagnostic Variables**

Variables			Mean	St. Dev.	Min.	Max.
<b>Human resources</b>	$x_{1t}$	New doctorate graduates per 1000 population aged 25-34	1.35	0.70	0.60	2.40
	$x_{2t}$	Percentage population aged 25-34 having completed tertiary education	30.68	5.51	26.41	40.00
	$x_{3t}$	Percentage population aged 25-64 participating in lifelong learning	6.13	2.49	3.54	9.73
<b>Attractive research systems</b>	$x_{4t}$	International scientific co-publications per million population	351.01	108.69	204.67	508.95
	$x_{5t}$	Top 10% most cited publications	5.90	1.10	4.42	7.31
	$x_{6t}$	Foreign doctorate students	7.50	3.64	2.09	12.29
<b>Innovation-friendly environment</b>	$x_{7t}$	Broadband penetration	8.32	0.90	7.00	9.14
	$x_{8t}$	Opportunity-driven entrepreneurship	1.46	0.57	0.78	2.28

Source: own calculations based on data from the European Innovation Scoreboard 2017 (European Commission, 2017)

In order to empirically analyse how the main drivers of innovation performance external to the firm differ between the Visegrad Group countries, zero unitarization method and a multivariate analysis were applied. The combination of these methods allow to an analysis the differences between the European Union countries (Balcerzak, 2015) and “enables comparing the values of synthetic index for all years” (Balcerzak, 2015, pp. 191) and were used for each of the EIS innovation dimensions related to the main drivers of innovation performance external to the firm (human resources, attractive research systems and innovation-friendly environment).

Firstly, the normalisation of diagnostic variables was carried out. In this respect, on the base of zero unitarization method, a constant reference point (the range of the normalized variable) was calculated in compliance with the following formula (Kukuła & Bogocz, 2014):

$$R(X_{jt}) = \max_{it} x_{ijt} - \min_{it} x_{ijt} \quad (1)$$

Regarding that all diagnostic variables are the stimulants, to normalisation of diagnostic variables the following formula was used (Kukuła & Bogocz, 2014):

$$z_{ijt} = \frac{x_{ijt} - \min_{it} x_{ijt}}{\max_{it} x_{ijt} - \min_{it} x_{ijt}}, \quad (2)$$

where  $z_{ijt} \in [0,1]$ ; ( $i = 1,2, \dots, n$ ); ( $j = 1,2, \dots, m$ ); ( $t = 1,2, \dots, l$ )

Next, the synthetic measure was calculated according to the following formula (Balcerzak, 2015):

$$SM_{it} = \frac{1}{m} \sum_{j=1}^m z_{ijt}, \quad (3)$$

where  $z_{ijt} \in [0,1]$ ;  $SM_{it} \in [0,1]$ ; ( $i = 1,2, \dots, n$ ); ( $j = 1,2, \dots, m$ ); ( $t = 1,2, \dots, l$ )

Above procedure allowed to investigate how the main drivers of innovation performance external to the firm differ between the Visegrad Group countries.

### 3. Problem Solution

Table 2 to 4 provide a multivariate analysis of the main drivers of innovation performance external to the firm between the Visegrad Group countries. With respect to the human resources dimension, the results show that among the V4 countries, the Czech Republic distinguish relatively the highest level of new doctorate graduates, percentage population aged 25-34 having completed tertiary education and percentage population aged 25-64 participating in lifelong learning (Table 2). Such situation concerns the period 2009-2015 and should be treated as positive, especially in the context of enhancing competitiveness of country, regions and firms.

**Table 2: The Results of a Multivariate Analysis of the Main Drivers of Innovation Performance External to the Firm Between the Visegrad Group Countries – Human Resources Dimension (in the Period 2009-2015)**

2009			2010			2011			2012			2013			2014			2015		
No.	Co.	SM	No.	Co.	SM	No.	Co.	SM	No.	Co.	SM	No.	Co.	SM	No.	Co.	SM	No.	Co.	SM
1	CZ	0.4872	1	CZ	0.4321	1	CZ	0.5714	1	CZ	0.5564	1	CZ	0.5171	1	CZ	0.5267	1	CZ	0.5490
2	PL	0.3446	2	SK	0.3655	2	PL	0.3446	2	PL	0.3872	2	PL	0.3913	2	PL	0.3795	2	PL	0.3580
3	SK	0.3420	3	PL	0.3446	3	SK	0.3429	3	SK	0.3333	3	SK	0.3466	3	SK	0.3333	3	HU	0.3452
4	HU	0.3019	4	HU	0.2870	4	HU	0.3153	4	HU	0.3313	4	HU	0.2835	4	HU	0.3233	4	SK	0.3415

Legend: CZ – the Czech Republic, HU – Hungary, PL – Poland, SK – Slovakia.

Source: own calculations based on data from the European Innovation Scoreboard 2017 (European Commission, 2017)

In contrast, the results provide evidence about Hungary ranked in the last place in terms of human resources dimension (especially in 2009-2014). This situation should be treated as negative in relation to build a competitive advantage of country, regions and firms. Within the EU countries from the Visegrad Group, Poland and Slovakia highlighted relatively the similar level of the main drivers of innovation performance external to the firm, related to human resources dimension (especially in 2009-2011, 2015). In line with the obtained results, the

level of indicators of human resources in these countries are in between the Czech Republic and Hungary. The results also reveal in Poland (in 2012-2014) the increasing level of new doctorate graduates, percentage population aged 25-34 having completed tertiary education and percentage population aged 25-64 participating in lifelong learning. This implies improvement of the main drivers of innovation performance external to the firm, which may result in enhancing Polish competitiveness.

Following attractive research systems dimension, the results indicate relatively high diversity between the Visegrad Group countries (Table 3).

**Table 3: The Results of a Multivariate Analysis of the Main Drivers of Innovation Performance External to the Firm Between The Visegrad Group Countries – Attractive Research Systems Dimension (in the Period 2009-2015)**

2009			2010			2011			2012			2013			2014			2015		
No.	Co.	SM	No.	Co.	SM	No.	Co.	SM	No.	Co.	SM	No.	Co.	SM	No.	Co.	SM	No.	Co.	SM
1	CZ	0.9286	1	CZ	0.8614	1	CZ	0.9138	1	CZ	0.9099	1	CZ	0.9099	1	CZ	1.0000	1	CZ	1.0000
2	HU	0.7352	2	HU	0.6682	2	HU	0.7127	2	HU	0.6972	2	HU	0.6972	2	HU	0.5845	2	HU	0.4665
3	SK	0.5632	3	SK	0.4940	3	SK	0.4589	3	SK	0.4961	3	SK	0.4961	3	SK	0.3699	3	SK	0.3713
4	PL	0.0000	4	PL	0.0000	4	PL	0.0000	4	PL	0.0000	4	PL	0.0000	4	PL	0.0000	4	PL	0.0000

Legend: Like in table 2.

Source: own calculations based on data from the European Innovation Scoreboard 2017 (European Commission, 2017)

According to the obtained results, in terms of international scientific co-publications per million population and top 10% most cited publications and foreign doctorate students, the Czech Republic outstand noticeable from the group of the EU countries from . This situation was seen in 2009-2015. It proves that the Czech Republic constantly improved the attractiveness of research system, which may enhance competitiveness position of country, regions and firms. Regarding Hungary and Slovakia, the obtained results highlight relatively high level of indicators connected with attractive research systems dimension. This should be treated as positive in regard to maintain and enhance the capacity to competitive advantage of country, regions and firms. On the other hand, among the other Visegrad Group countries, Poland ranked in the last place in the field of international scientific co-publications per million population and top 10% most cited publications and foreign doctorate students. This situation, in relation to relatively lack of enhancement the level of attractive research systems indicators should be treated relatively negative in relation to enhance competitiveness of country, regions and firms.

Concerning innovation-friendly environment dimension, the results imply relatively high rank of Hungary among the other Visegrad Group countries (Table 4). In compliance with the obtained results, Hungary distinguished relatively the highest level of enhancement of broadband penetration and opportunity-driven entrepreneurship (in 2009-2015). Such situation should be treated as positive in relation to build a competitive advantage of country, firms and regions. Among the other V4 countries, the Czech Republic and Poland highlighted relatively similar, high level of the indicators connected with innovation-friendly environment dimension. This should be treated as positive in context of competitiveness improvement.

**Table 4: The Results of a Multivariate Analysis of the Main Drivers of Innovation Performance External to the Firm Between The Visegrad Group Countries – Innovation-Friendly Environment Dimension (in the Period 2009-2015)**

2009			2010			2011			2012			2013			2014			2015		
No.	Co.	SM	No.	Co.	SM	No.	Co.	SM	No.	Co.	SM	No.	Co.	SM	No.	Co.	SM	No.	Co.	SM
1	HU	0.9190	1	HU	0.9431	1	HU	0.8512	1	HU	0.7615	1	CZ	0.7500	1	CZ	0.7500	1	HU	0.6189
2	CZ	0.7500	2	CZ	0.7500	2	CZ	0.7500	2	CZ	0.7500	2	HU	0.6363	2	SK	0.6041	2	SK	0.5716
3	SK	0.7021	3	SK	0.7021	3	SK	0.7021	3	SK	0.6898	3	SK	0.6353	3	HU	0.5849	3	CZ	0.5000
4	PL	0.0000	4	PL	0.0000	4	PL	0.0000	4	PL	0.0000	4	PL	0.0000	4	PL	0.0000	4	PL	0.1667

Legend: Like in table 2.

Source: own calculations based on data from the European Innovation Scoreboard 2017 (European Commission, 2017)

Within the EU countries from the Visegrad Group, the level of enhancement of broadband penetration and opportunity-driven entrepreneurship in Poland differed significantly from the rest of V4 countries.

#### 4. Conclusion

The results reveal, that in terms of the main drivers of innovation performance external to the firm, the Visegrad Group countries differ from each other. In this respect, relatively the highest level of indicators of human resources and attractive research systems dimension distinguished the Czech Republic. This situation, in relation to the relatively high level of indicators connected with innovation-friendly environment dimension, may influence on the enhancing abilities of the Czech Republic to adaptation to dynamic environment and, in consequences, on enhancing competitiveness and European integration processes. The results show relatively high level of the main drivers of innovation performance external to the firm in Slovakia and Hungary. This implies positive backgrounds for enhancing competitiveness of country, regions and firms. On the other hand, despite relatively high level of the main drivers of innovation performance external to the firm in the Czech Republic, Slovakia and Hungary, their declining trend was noticed. This situation may result in a slowdown of competitiveness and European integration processes of the above countries. With regard to Poland, the results highlighted relatively very low of indicators related especially to attractive research systems and innovation-friendly environment dimensions. In that terms, Poland outstand the most from the group of the EU countries from V4. Such conditioning may influence negative to abilities to adaptation to uncertainty in the environment and rapid changes.

These findings have and policy practical implications. In this regard, the findings provide the necessity to improve actions enhancing the level of the main drivers of innovation performance external to the firm. Such actions should focus, among others, on shaping conditions for networking institutional environment, research organisations, universities and firms and may result in increasing competitiveness of the European Union and European integration processes.

This study is not without limitations. It would be interesting to investigate the causes of differences of the main drivers of innovation performance external to the firm between the Visegrad Group countries.

The complexity of the main drivers of innovation performance external to the firm requires further studies. In this respect, it seems necessary to investigate whether the results of the research also hold in other spatial contexts (regions). It would be also interesting to undertake similar studies applying multi-criteria statistical methods.

## References

- [1] Acs, Z. J. and Audretsch, D. B. and Lehmann, E. E. and Licht, G. (2016): National Systems of Innovation, *Journal of Technology Transfer*, vol. 42, Issue 5, pp. 997–1008.
- [2] Barca, F. (2009). *An Agenda for a Reformed Cohesion Policy. A place-based approach to meeting European Union challenges and expectations. Brussels: European Commission.*
- [3] Balcerzak, A. P. (2015). Europe 2020 Strategy and Structural Diversity Between Old and New Member States. Application of Zero Unitarization Method for Dynamic Analysis in the Years 2004-2013. *Economics and Sociology*, vol. 8 no. 2, pp. 190–210.
- [4] Coenen, L and Asheim, B. and Bugge, M. M. and Herstad S, J. (2017). Advancing regional innovation systems: What does evolutionary economic geography bring to the policy table? *Environment and Planning C Government and Policy*, vol. 35 issue 4, pp. 600–620.
- [5] Fagerberg, J. (2017). Innovation Policy: Rationales, Lessons and Challenges, *Journal of Economic Surveys*, vol. 31 issue 2, pp. 497–512.
- [6] Florida, R. (2014). The Creative Class and Economic Development. *Economic Development Quarterly*, vol. 28 (3), pp. 196–205.
- [7] Huggins, R. and Johnston, A. and Steffenson, R. (2008). Universities, knowledge networks and regional policy. *Cambridge Journal of Regions, Economy and Society*, 1 (2), pp. 321–340.
- [8] Fritsch, M. and Storey, D. J. (2014). Entrepreneurship in a Regional Context: Historical Roots, Recent Developments and Future Challenges, *Regional Studies*, 48 (6), pp. 939–954.
- [9] Kukuła, K. and Bogocz, D. (2014). Zero Unitarization Method and its Application in Ranking Research in Agriculture. *Economic and Regional Studies*, vol. 7 no. 3, pp. 5–13.
- [10] Maj, J. (2017). Together or apart? Diversity management and corporate social responsibility in Polish enterprises. In *29th IBIMA Conference*. Vienna: International Business Information Management Association, pp. 517–523.
- [11] Martin, B. R. and Tang, P. (2006). The benefits from publicly funded research. Working Paper No 161. University of Sussex: SPRU Electronic Working paper Series.
- [12] Melecký, L. and Staničková, M. (2014). Regional Efficiency Evaluation by DEA Approach: Comparison of Selected EU15 and EU13 Countries. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 465–475.
- [13] The European Commission (2017). European Innovation Scoreboard 2017.
- [14] Zygmunt, A. (2017). Innovation activities of Polish firms. Multivariate analysis of the moderate innovator countries. *Oeconomia Copernicana*, 8 (4), pp. 505–521.
- [15] Zygmunt, J. (2017). Regional dimension of entrepreneurship in a developing economy. An analysis of Polish Północno-Zachodni Region. In the *30th IBIMA Conference*. Madrid: International Business Information Management Association, pp. 1483–1491.

# The EU Funds and the Nascence of Firms in a Transition Economy

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## **Abstract**

*The aim of the paper is to analyse how the nascence of firms which were subsidised in a transition economy with the EU funds is determined by the economic development. The EU funds and firms nascence in a transition economy were studied for Poland for 2007-2015 period. Hypotheses were tested with the usage of the Ordinary Least Squared regression with robust standard errors. The statistical significance of the results was determined with F-test. Data sources were the Statistics Poland and the final report of the Operational Programme Human Capital 2007-2013 Implementation in Poland. The main finding is that the nascence of subsidized firms in Poland, as well as the creation of new workplaces in these firms have not been determined by such dimensions as economy structure, innovative capacity, and entrepreneurial activity. The findings may be interesting for policymakers in establishing and implementing subsidy schemes for starting a business.*

**Keywords:** EU funds, nascent firms, Poland, subsidies, transition economy

**JEL Classification:** G18, L26, P25, R11

## **1. Introduction**

The importance of the financial sources for the firms establishment is uncontested, with capital constrains considered as a significant barrier of the nascence (e.g., Caliendo and Künn, 2014). Within different financial sources, the EU funds represent a substantial founding for newly born enterprises. Being directed to foster economic growth within the EU member states (Ederveen et al., 2006) such funds support inter alia starting a business, mostly by providing subsidies and concessional loans.

Start-up subsidies have been researched in a growing body of studies (e.g., Becker et al., 2010; Caliendo et al., 2015). However, this paper may contribute to the existing literature by focusing on a transition economy. With entrepreneurship being suppressed for decades of a centrally planned policy, such economy often suffers from low tendency for entrepreneurial activity. Particularly, it seems interesting to examine whether the economic environment does matter for the nascence of firms subsidized with the EU funds in a transition country. This issue has not been entirely recognised. Hence, the aim of the paper is to analyse how the nascence of these firms in Poland is determined by the economic development.

The paper contributes to the knowledge by considering whether the transformation environment impacts on a propensity for firm's nascence with the public subsidy. By regarding the significance of economic environment for the nascence of the subsidised firms this paper extends research on firm's performance in transition economies. The findings may be helpful in supporting entrepreneurial activity in these economies.

This paper is organized as follows. First section presents the theoretical background and problem formulation, while second section provides method of the research, together with data and variables description. Section three focuses on findings. This is followed by the conclusions.

## 2. Problem Formulation and Methodology

The EU funds impact on national and regional competitiveness (Melecký, 2016). With the subsidies for firm's nascence, the EU supports the increase of entrepreneurial activity. Specifically, these subsidies are aimed mainly in fostering unemployed persons to establish their own businesses. However, the overall impact of the EU funds may be heterogeneous. Some studies provide evidence that although these funds stimulate growth, their effect on employment increase is ambiguous (e.g., Becker et al., 2010). The subsidisation of the nascence of firms may also carry risk of dead-weight effect emergence. This effect appears when, with the aim of being subsidised, the nascent entrepreneurs record themselves as unemployed (Caliendo and Künn, 2014).

The nascence of firms is determined by the economic environment. The level of economic development is regarded as pivotal for self-employment dynamics (Wennekers et al., 2005). However, the dependence of firm's nascence on the economic development seems to be ambiguous. On the example of Germany, Caliendo and Künn found that good economic conditions weight for one sample of subsidised start-ups as against the other sample of such firms (2014). The possible explanation of this incoherence is seen in different features of firm founders (Caliendo and Künn, 2014). With the diversity (Maj, 2017), skills, experience, social networks, it seems that human capital does have a substantial influence on firms nascence.

Since human capital may influence attitudes towards entrepreneurial activity, it seems interesting to recognise the extent to which the level of this capital matters for a transition economy. With a scarcity of previous market competences (Smallbone and Welter, 2001), a transition economy often suffers from a deficit of skills necessary for establishing and running a business. However, it may be expected that along with transition processes, these skills adjust to a market economy (Zygmunt J., 2017). Entrepreneurial attitudes may be stimulated with the subsidies for start-ups. Hence, it is supposed that the influence of human capital on the nascence of firms is positive.

A transformation to a market economy involves a structural change from public owned manufacturing market (McMillan and Woodruff, 2002) to the increasing value of the service sector, which generally stimulates new business nascence (Wennekers et al., 2005). The sector of economic activity does also matter for start-ups survival rate (Geroski, 1995). It is anticipated then that the economy structure weights for decisions of establishing start-ups in a transition economy.

Economic development may be also embodied in innovative capacity. Inflows of knowledge seem to determine entrepreneurial activity (Acs et al., 2009), with R&D activities having an impact on the rate of innovation (Wennekers et al., 2005). Innovation is important for reaching the competitive advantages (Zygmunt A., 2017). With a knowledge transfer being mostly restricted in a centrally planned economy, the knowledge spillovers nearly do not occur. However, the transformation to a free market encourages R&D and innovation, and seems favourable for boosting entrepreneurial activity. Hence, it is expected that together with the growth of innovative capacity of a transition economy, the nascence of firms increases.

Hence, the following hypotheses are tested in this paper:

H1 Human capital in a transition economy supports the nascence of firms financed with the EU funds

H2 Economy structure of a transition country influences new firms establishment with public subsidies

H3 The nascence of firms with the support of the EU funds depends on innovative capacity of a transition economy

## 2.1 Model and Data

To research how the nascence of firms subsidised with the EU funds is determined by the economic development of a transition economy, the Ordinary Least Squared regression with robust standard errors was used. Hypotheses were tested with the following model:

$$NE(S)_i = \beta_0 + R\&D_i\beta_1 + I_i\beta_2 + ES_i\beta_3 + T_i\beta_4 + D_i\beta_5 + \varepsilon_i \quad (1)$$

F-test was employed to test for the model's statistical significance. To examine the regression's goodness-of-fit, the coefficient of determination ( $R^2$ ) was used. The autocorrelation was controlled with the Durbin-Watson statistic. High level of collinearity between variables was identified with Pearson's correlation. It was assumed that such collinearity is when Pearson's correlation coefficient is above 0.9.

The EU funds and the nascence of firms in a transition economy was studied on the example of Poland. Consistent with Ederveen et al. (2006) country-level approach was applied. Nonprobability sampling was used in terms of the research period. Since it seems important to regard the EU policy with its completed outcomes, the EU cohesion policy framework 2007-2013 was considered. Consequently, the research period is 2007-2015, allowing for the "n+2" financial rule<sup>1</sup>. However, since first outcomes of this policy were registered in 2008, data analysis starts from 2008 ( $i = 2008, 2009, \dots, 2015$ ).

With most of funds for firm's nascence coming in the regarded period from the Operational Programme Human Capital, the research attention was paid on the programme in question. The programme was covered by the European Social Fund (ESF) with more than 11.6 billion euro budget for Poland<sup>2</sup>, with 27% of this budget for professional qualifications rising and for firm's nascence. Average annual data were sourced from the Statistics Poland (Statistics Poland [online], 2018) and the Final Report of the Operational Programme Human Capital 2007-2013 Implementation in Poland (Sprawozdanie końcowe [online], 2017).

Dependent variable was a number of persons who received the EU funds for starting a business (per 10,000 inhabitants) in a year  $i$  ( $EN(S)_i$ ). Since the nascence of firm was a precondition for the EU funds appropriation, it was assumed that this number represents the firms established with the ESF as well. To check for robustness the analysis was also done for the whole population of nascent firms in the research period (model 2). This population was measured as the number of new firms per 10,000 inhabitants in a year  $i$  ( $EN_i$ ). The EU funds and firms nascence were also studied with  $WP(S)_i$  representing the number of new workplaces created within the ESF for starting a business per 10,000 inhabitants in a year  $i$  (model 3), with robustness check with  $WP_i$  referring to the number of new workplaces created in a year  $i$  per 10,000 inhabitants (model 4).

Explanatory variables were: inflows of knowledge in a year  $i$  ( $R\&D_i$ ), innovative activity in a year  $i$  ( $I_i$ ), human capital in a year  $i$  ( $T_i$ ), and economy structure in a year  $i$  ( $ES_i$ ). These variables were measured as follows:



- a.  $R\&D_i$  was proxy by the intramural R&D expenditure in PLN<sup>3</sup> per capita
- b.  $I_i$  was measured as spending in PLN on innovative activity in enterprises for one person who is professionally active
- c.  $T_i$  was measured as share of population with tertiary education degrees in relation to total employment (in %)
- d.  $ES_i$  was proxy by three variables to allow for all nature of economy structure. Hence, the agriculture sector ( $A_i$ ) was measured as share of employment in agriculture in total employment (in %). The industry sector ( $IN_i$ ) was measured as share of employment in industry in total employment (in %). The service sector ( $S_i$ ) was proxy by share of employment in service in total employment (in %).

It seems interesting to check for entrepreneurial activity in Poland. Hence, the control variable, population density ( $D_i$ ), was engaged. This approach is consistent with Wennekers et al. (2005) who argue that entrepreneurial activity is likely to increase along with the population density enhancement. It is expected that the number of nascent firm grows together with the increase of the population density.  $D_i$  was measured as the number of people per square kilometre.

Descriptive statistics of variables are shown in table 1.

**Table 1. Descriptive Statistics**

Variable	Mean	SD	Min	Max
<b>NE(S)</b>	8.07	2.98	3.12	12.59
<b>NE</b>	93.00	5.43	83.00	104.00
<b>WP(S)</b>	2.25	0.82	0.83	3.43
<b>WP</b>	39.30	3.61	33.57	44.22
<b>R&amp;D</b>	331.31	86.99	202.20	469.70
<b>I</b>	2052.20	214.20	178.90	2515.24
<b>A</b>	12.61	0.83	11.50	14.00
<b>IN</b>	30.74	0.49	30.30	31.90
<b>S</b>	56.64	1.22	54.10	58.00
<b>T</b>	27.54	3.01	22.57	31.87
<b>D</b>	122.75	0.43	122.00	123.00

Source: Own estimation based on: Statistics Poland [online], 2018; Sprawozdanie końcowe [online], 2017.

Because of high levels of collinearity which were identified between some variables, the following variables were excluded from the further consideration:  $A_i$ ,  $S_i$ ,  $T_i$ .

### 3. Problem Solution

The models' estimation results are shown in table 2. The findings for  $WP_i$  are not presented there since, with p-value for test F higher than 0.10, the model 4 proved to be statistically insignificant.

The results<sup>4</sup> indicate that innovative capacity does not impact the nascence of firms with the EU support. Inflows of knowledge and innovative activity in a transition economy seem to not weight in decisions of starting a business with a public subsidy. Similarly, the analysis for the number of new workplaces created in these firms has not revealed any statistically significant influence of innovative capacity. Hypothesis 2 has not been supported. However, the findings

for robustness check (Model 2) provide evidence that when the whole population of nascent firms is considered, the intramural R&D expenditure per capita is of consequence for starting a business.

**Table 2. Estimation Results**

	<b>Model 1</b> <b><math>NE(S)_i</math></b>	<b>Model 2</b> <b><math>NE_i</math></b>	<b>Model 3</b> <b><math>WP(S)_i</math></b>
<b>const</b>	329.438 (376.223)	1284.960** (296.866)	100.748 (100.799)
<b>R&amp;D</b>	0.0019 (0.0169)	-0.5051** (0.0155)	0.0003 (0.0045)
<b>I</b>	-0.0079 (0.0050)	0.0100 (0.0051)	-0.0023 (0.0013)
<b>IN</b>	-3.6586 (2.6222)	-18.1483*** (2.5389)	-1.0734 (0.6987)
<b>D</b>	-1.5742 (2.5896)	-5.1965* (1.9797)	-0.4964 (0.6940)
<b>R<sup>2</sup></b>	0.4402	0.8934	0.4800
<b>p – value for test F</b>	0.0749	0.0040	0.0618

Autocorrelation consistent. Level of statistical significance: \*\*\* $p \leq 0.01$ ; \*\*  $p \leq 0.05$ ; \* $p \leq 0.10$ . Source: Own estimation based on: Statistics Poland [online], 2018; Sprawozdanie końcowe [online], 2017

Contrary to research expectations, the relationship between the economy structure and the nascence of subsidized firms has not been identified. The economy structure has not also affected the number of new workplaces in firms established with the EU funds. It does not correspond to Hypothesis 3. Interestingly, the results for the whole population of new born firms lead to the conclusion of a great value of the economy structure for firm's nascence.

The analysis for the control variable does not reveal any significant impact of entrepreneurial activity both for starting a subsidized business and creating new workplaces there. The results for whole population of start-ups in Poland in the period 2007-2015 show albeit that population density influences the nascence of firms in a transition economy.

#### 4. Conclusion

This paper may contribute to the knowledge on entrepreneurship in transition economies by studying the nascence of firms subsidized with the EU funds, in reference to the economic environment. The following economic dimensions have been analysed: human capital, economy structure, innovative capacity, and entrepreneurial activity for Poland for the period 2007-2015. The findings provide evidence that firms nascence with the support of the EU funds, as well the creation of new workplaces in these firms have not been dependent on the economic environment. However, the analysis for the all new born firms in Poland in the research period allows to conclude of the substantial weight of inflows of knowledge, economy structure, and entrepreneurial activity in starting a business in a transition economy. With regard to this, the absence of the direct linkage between the economy development and the nascence of subsidized firms seems interesting and may indicate that the availability of a

subsidy predominately matters in decision for establishing such firm, compared with the other considerations. It may also reflect a moral hazard problem when generally lower requirements for such firms reduce the need to consider economic conditions that may affect the survival rates of these firms. This is to some extent in line with Caliendo et al. who proved that an incentive for subsidized firm's growth is diminished by the decreased requirements with regard to these firms outcomes (2015). The findings may be interesting for policymakers in establishing and implementing subsidy schemes for starting a business.

This paper suffers from some limitations. First, it does not control for the business cycle. Since this cycle relevantly influences the willingness for establishing a firm (e.g., Wennekers et al., 2005), it seems interesting in further research to identify to what extent the business cycle in a transition economy determines the nascence of firms financed with the public subsidy. Second, the possible interactions between these firms and the economy have not been regarded in this paper. More specifically, the impact of the nascence of these firms on economic development has not been considered. Third, some may argue that since this study regards the EU funds within ESF, which were oriented mostly on entrepreneurship development among persons who remain workless, a limitation of this study is that it focuses only on "necessity" entrepreneurs. However, this paper follows the approach of Shane who claims that regardless of motivation for starting a business, the firm track record may be similar (2009, p. 142). Nonetheless, some studies provide evidence that even if such firms face higher survival rates, they often are less effective in terms of innovation, growth, and income (Caliendo et al., 2015). With regard to that future research on performance and survival of firms which were subsidised in a transition economy seems highly interesting.

### **Endnotes**

<sup>1</sup> According to this rule "funds must be spent by the end of the second year after their allocation". Source: European Commission (2018). Regional Policy Principles [online]. [cit. 2018-02-18]. Available at: [http://ec.europa.eu/regional\\_policy/en/policy/how/principles/](http://ec.europa.eu/regional_policy/en/policy/how/principles/).

<sup>2</sup> Both the EU and domestic funds.

<sup>3</sup> PLN is a Polish currency.

<sup>4</sup> Since the elimination of strongly correlated variables applied to the variable  $T_i$ , the Hypothesis 1 has not been tested.

### **References**

- [1] Acs, Z.J., Braunerhjelm, P., Audretsch, D.B et al. (2009). The knowledge spillover theory of entrepreneurship. *Small Business Economics*, vol. 32, iss. 1, pp. 15-30.
- [2] Becker, S.O., Egger, P., and von Ehrlich, M. (2010). Going NUTS: The effect of EU Structural Funds on regional performance. *Journal of Public Economics*, vol. 94, iss. 9-10, pp. 578-590.
- [3] Caliendo, M., Hogenacker, J., and Künn, S. et al. (2015). Subsidized start-ups out of unemployment: a comparison to regular business start-ups. *Small Business Economics*, vol. 45, iss. 1, pp. 165-190.
- [4] Caliendo, M. and Künn, S. (2014). Regional Effect Heterogeneity of Start-up Subsidies for the Unemployed. *Regional Studies*, vol. 48, iss. 6, pp. 1108-1134.

- [5] Ederveen, S., de Groot, H. L.F. and Nahuis, R. (2006). Fertile Soil for Structural Funds? A Panel Data Analysis of the Conditional Effectiveness of European Cohesion Policy. *Kyklos*, vol. 59, iss. 1, pp. 17–42.
- [6] European Commission (2018). Regional Policy Principles [online]. [cit. 2018-02-18]. Available at: [http://ec.europa.eu/regional\\_policy/en/policy/how/principles/](http://ec.europa.eu/regional_policy/en/policy/how/principles/).
- [7] Geroski, P.A. (1995). What Do We Know about Entry? *International Journal of Industrial Organization*, vol. 13, iss.4, pp. 421–440.
- [8] Maj, J. (2017). Diversity and corporate social responsibility reporting in enterprises from the energy industry listed on the Warsaw stock exchange. In *International Multidisciplinary Scientific GeoConference, Surveying Geology and Mining Ecology Management, SGEM*, 17 (53), pp. 159-166.
- [9] Melecký, L. (2016). Changing of EU Project and Grant Management Approach in Response to New Trends of Programming Period 2014–2020. In *International Conference on European Integration*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 605-614.
- [10] McMillan, J. and Woodruff, C. (2002). The central role of entrepreneurs in transition economies. *Journal of Economic Perspectives*, vol. 16, iss. 3, pp. 105-121.
- [11] Shane, S. (2009). Why encouraging more people to become entrepreneurs is bad public policy. *Small Business Economics*, vol. 33, iss. 2, pp. 141-149.
- [12] Smallbone, D., and Welter, F. (2001). The distinctiveness of entrepreneurship in transition economies. *Small Business Economics*, vol. 16, iss. 4, pp. 249-262.
- [13] Sprawozdanie końcowe z wdrażania Programu Operacyjnego Kapitał Ludzki 2007-2013 (2017) [online]. [cit. 2018-01-15]. Available at: [http://www.efs.2007-2013.gov.pl/AnalizyRaportyPodsumowania/poziom/Documents/Sprawozdanie\\_PO\\_KL\\_koncowe\\_po\\_KM\\_POKL.pdf](http://www.efs.2007-2013.gov.pl/AnalizyRaportyPodsumowania/poziom/Documents/Sprawozdanie_PO_KL_koncowe_po_KM_POKL.pdf).
- [14] Statistics Poland (2018). Local Data Bank [online]. [cit. 2018-01-09]. Available at: <https://bdl.stat.gov.pl/BDL/dane/podgrup/temat>.
- [15] Wennekers, S., van Wennekers, A., Thurik, R. et al. (2005). Nascent Entrepreneurship and the Level of Economic Development. *Small Business Economics*, vol. 24, iss. 4, pp. 293-309.
- [16] Zygmunt, A. (2017). Innovation activities of Polish firms. Multivariate analysis of the moderate innovator countries. *Oeconomia Copernicana*, vol. 8, iss. 4, pp. 505-521.
- [17] Zygmunt J. (2017). Regional dimension of entrepreneurship in a developing economy. An analysis of Polish Północno-Zachodni Region. In K.S. Soliman (ed.). *Vision 2020, Sustainable Economic Development, Innovation Management, and Global Growth, 30th International Business Information Management Association Conference*, Madrid, pp. 1483-1491.

## **Impact of ESIF on Economic Growth of Regions of the Czech Republic – Panel Data Regression Analysis**

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### **Abstract**

*This research paper aims to estimate the impact of the European Structural and Investment Funds (ESIF) on economic growth of the Czech Republic during the period 2004-2015 using panel data regression techniques. ESIF are instruments of European economic and social cohesion policies. The primary goal of these policies is to foster economic growth and convergence among the member states of the European Union through the reallocation of financial resources from ESIF. During 2004-2015, the Czech Republic was involved in three programming periods in which projects of an approximate value of 939 billion CZK were supported and implemented. In that period, the contribution from ESIF amounted to approximately 757 billion CZK while 182 billion CZK were allocated from national resources. Besides the standard panel data econometric techniques like pooled OLS or FE, a spatial panel data econometric method is employed to verify the robustness of the results. Evidence of this research shows a positive relationship between ESIF and economic growth of NUTS3 regions of the Czech Republic. Furthermore, the results also indicate economic convergence achieved among NUTS3 regions of the Czech Republic.*

**Keywords:** economic convergence, economic growth, ESIF, regression analysis

**JEL Classification:** C23, H54, O40, R11

### **1. Introduction**

ESIF are instruments of European economic and social cohesion policies with the aim to support the economic growth of EU member states and promote economic convergence among them. Although the Czech Republic was involved in three programming periods during 2004-2015, in which it received financial aid of 757 billion CZK on various projects, the impact evaluation of ESIF on economic growth of the Czech Republic has not been carried out yet. Therefore, this research paper aims to estimate the impact of ESIF on regional economic growth of the Czech Republic during the period 2004-2015. Based on panel data regression techniques applied to macroeconomic data of NUTS3 regions, the results show that ESIF has had a positive impact on regional economic growth. Moreover, the models indicate that economic convergence among Czech regions has been achieved.

The first pioneering studies and analysis evaluating the impact of EU funds were presented already in the 1990s. The very first research papers investigated questions related to ESIF by using basic econometric techniques. For instance Gaspar and Pereira (1992) and Fuente et al. (1995) examine the impact of structural funds (hereinafter SF) and cohesion policy in EU countries like Spain or Portugal. Dall'èrba and Galo (2003) and Cappelen et al. (2003) investigated the impact of SF in terms of convergence among individual regions. These and

many other early studies confirmed the significant positive impact of SF on economic performance of EU countries and the convergence dynamics. Later on, the simple econometric techniques were replaced by more profound analyses that focused, among other, on spill-over effects stemming from the EU funds. Mohl and Hagen (2010) applied the spatial panel data regression model that accounts for spill-over effects to evaluate the impact of the EU funds in the programming period 2000-2006 using the data set covering NUTS2 territorial units. There is also a stream of literature that studies the effects of existing macroeconomic conditions and institutional or political environment on effectiveness of the EU funds (e.g. Cappelen et al. 2003, or Kulhanek 2014). Some other studies, such as Pellegrini et al. (2013) or Maynou et al. (2014), confirmed the positive impact of SF on economic growth with moderate effects on the convergence among regions using the data covering the programming period 2007-2013.

In the Czech Republic, there is a minority of studies employing quantitative or modelling approaches aimed at impact evaluation of the EU funds. The latest examples of such studies are Kejak and Vávra (1999) and Ministry of Regional Development (2006). The former paper utilises the HERMIN model to estimate potential impacts of the EU funds on the macroeconomic conditions in the Czech Republic through expenditures on physical infrastructure during the programming period 2000-2006. The later MMR's paper employs the same model for the ex-ante impact evaluation of the programming period 2007-2013 on macroeconomic situation in the Czech Republic. There is thus still potential for further research.

The rest of the paper is organised as follows. Section 2 outlines the methodology. Section 3 discusses the estimation of results. Section 4 concludes.

## 2. Methodology

### 2.1 Model Specification

To evaluate the impact of ESIF on the regional economic growth of the Czech Republic a neoclassical growth model has been used. The modelling approach closely follows Rodríguez-Pose and Novak (2013). The variables are specified in lags due to potential endogeneity which might bias the estimates of parameters, and therefore negatively affect the results of the estimation. The baseline model to be estimated takes the following form:

$$\ln(y_{i,t}/y_{i,t-1}) = \beta_0 + \beta_1 \ln(y_{i,t-1}) + \beta_2 \ln(innov_{i,t-1}) + \beta_3 \ln(ESIF_{i,t-1}) + \beta_4 infr_{i,t-1} + \beta_5 educ_{i,t-1} + u_{i,t} \quad (1)$$

where the subscript  $i = 1, \dots, 14$  denotes the region and the subscript  $t = 1, \dots, 12$  denotes the time period.  $y_{i,t}$  is the real GDP per capita,  $innov_{i,t}$  measures R&D activity,  $ESIF_{i,t}$  is the variable capturing the ESIF,  $infr_{i,t}$  stands for the level of infrastructure, and  $educ_{i,t}$  is an indicator of a quality of human capital. The reasoning to include individual variables is following.

- Real GDP per capita ( $y_{i,t}$ ): A standard measure of regional economic performance. Its lagged value captures the conditional convergence and the starting growth position.
- Research and development ( $innov_{i,t}$ ): Innovation has long been recognized as a key factor for sustainable economic growth. In particular, Křístková (2012) and Křístková (2013) find a positive impact of R&D activities on economic growth in the Czech Republic. Literature identifies several possible explanatory variables for R&D. Due

to limited data availability at the regional level, private R&D expenditures, public R&D expenditures, or number of patents are available. Since the patent activity in the Czech Republic is not so high and public R&D expenditures might serve different purposes than innovation activities, private R&D expenditures are seen as the most suitable candidate. Private R&D expenditures are expressed in per capita terms.

- The level of infrastructure ( $infr_{i,t}$ ): A number of studies have confirmed the significant impact of infrastructure on economic growth (e.g. Aschauer 1989, Canning 1999, Demetriades and Mamuneas 2000, or Röller and Waverman 2001). Therefore, infrastructure development is seen as an important factor behind economic growth. Various studies use various proxies for infrastructure (such as motorways, railways, or telecommunications). In order to obtain more complex and robust indicator of infrastructure development, the approach of Calderon and Servén (2004) (who construct the composite index of infrastructure based on principal component analysis) is employed. The index includes three variables: the density of the road network per square km, the density of railway lines per square km and the installed power capacity per one thousand inhabitants.
- The quality of human capital ( $educ_{i,t}$ ): Standard growth regressions account for human capital as one of the main drivers of economic growth (e.g. Oancea et al. (2017) find a positive relationship for the Czech Republic). The common approach is to use a share of population with tertiary education as a proxy variable.

During the investigated period the Czech Republic experienced a significant drop in economic growth caused by the financial crisis. This situation led to a suspicion about an existence of a structural break. As the time of this structural break is known, the data sample has been divided into two subsamples (2004-2008 and 2009-2015). A statistical significance of this break has been investigated by using of the Chow test of a structural change. The statistical test confirms the presence of the structural break (10.16, p-value: 0.000). The baseline model (1) is augmented with the dummy variable  $sb_{i,t}$  to control for this issue:

$$\ln(y_{i,t}/y_{i,t-1}) = \beta_0 + \beta_1 \ln(y_{i,t-1}) + \beta_2 \ln(innov_{i,t-1}) + \beta_3 \ln(ESIF_{i,t-1}) + \beta_4 infr_{i,t-1} + \beta_5 educ_{i,t-1} + \beta_6 sb_{i,t} + u_{i,t} \quad (2)$$

The results of the applied panel data regression methods on the model (2) might be biased due to spatial effects. As the interconnection between the regions is substantial, the economic performance of one region can significantly affect the economic performance of its neighbouring regions. To account for the spill-over effects, the spatial panel data regression method (the spatial lag model) in line with Elhorst (2009) is employed. The spatial lag model relies on the weighting matrix  $W$  that contains information about the interconnection between the regions. The matrix  $W$  is square and symmetric, and it has fourteen rows (columns) that correspond to fourteen regions that constitute the Czech Republic. The diagonal elements of the matrix  $W$  are equal to zero and the non-diagonal entries  $w_{jk}$  characterize the spatial dependence between the region  $j$  and  $k$ . Following Ertur and Koch (2006), the weighting matrix is constructed based on geographical distance between the capitals of the regions (because the capital of region Praha and Středočeský kraj coincide, distance between these two regions is set arbitrarily to 20 km). The matrix is normalised such that the sum of elements across the rows is equal to one. The elements of the weighting matrix  $W$  are defined as  $w_{jk} = w_{jk}^* / \sum_j w_{jk}^*$  with:

$$w_{jk}^* = \begin{cases} 0 & \text{if } j=k \\ d_{jk}^{-2} & \text{otherwise} \end{cases}$$

where  $d_{jk}$  is distance between capitals of the region  $j$  and  $k$ . To capture the gravity function, the second power of distance is utilised. Apart from the inclusion of the spatially weighted dependent variable, the model (2) remains unchanged. Therefore, the spatial lag model takes the form:

$$\ln(y_{i,t}/y_{i,t-1}) = \beta_0 + \rho W \ln(y_{i,t}/y_{i,t-1}) + \beta_1 \ln(y_{i,t-1}) + \beta_2 \ln(\text{innov}_{i,t-1}) + \beta_3 \ln(\text{ESIF}_{i,t-1}) + \beta_4 \ln \text{fr}_{i,t-1} + \beta_5 \text{educ}_{i,t-1} + \beta_6 \text{sb}_{i,t} + u_{i,t} \quad (3)$$

Since the model specified in equations (1) to (3) contains a dynamic component, it is possible to compute the long-term impact of ESIF on economic growth (please see Mohl and Hagen (2010) for the derivation of the long-term elasticity). The long-term impact is then interpreted as elasticity, i.e., a one percent increase of ESIF per capita leads to an increase in the regional real GDP per capita by X percent.

## 2.2 Data

The dataset contains data for fourteen NUTS3 regions of the Czech Republic. The data sample covers the period 2004-2015 on a yearly basis. In total, the data sample creates a balanced panel with 168 observations. The primary data sources are the monitoring systems MSSF, MSC2007 and MSC2014+ of the Ministry of Regional Development of the Czech Republic, an open source database of the Czech Statistical Office and ARAD database of the Czech National Bank.

**Table 1: Descriptive Statistics (overall)**

Variable	Mean	SD	Min	Max	Observations
Real GDP p.c. growth	0.021	0.036	-0.089	0.104	168
Ln real GDP p.c.	12.716	0.259	12.441	13.664	168
Ln private expenditures on R&D p.c.	7.449	0.819	4.986	9.035	168
Ln ESIF payments p.c.	8.030	1.898	1.267	10.171	168
Index of infrastructure	-1.145	0.747	-2.555	0.210	168
Number of people with tertiary education, a share of population	0.093	0.039	0.041	0.242	168

**Table 2: Correlations**

Variable	(a)	(b)	(c)	(d)	(e)	(f)
Real GDP p.c. growth (a)	1.000					
Ln real GDP p.c. (b)	0.023	1.000				
Ln private expenditures on R&D p.c. (c)	0.059	0.632	1.000			
Ln ESIF payments p.c. (d)	-0.393	0.131	0.144	1.000		
Index of infrastructure (e)	-0.109	-0.508	-0.536	0.149	1.000	
Number of people with tertiary education, a share of population (f)	-0.064	0.883	0.707	0.306	-0.486	1.000

The financial sources from ESIF funds comprise the financial sources implanted under the National strategic reference framework for the first two programming periods (2004-2013) and



the Partnership agreement for the last programming period (2014-2015). Additionally, the data from Rural Development Program were employed. The dataset contains only the payments that can be addressed to individual regions, i.e., multi-regional programmes are not included. The database of the Czech Statistical Office is used to retrieve data on regional GDP per capita, private expenditures on R&D activities, tertiary education and infrastructure. The GDP deflator is obtained from ARAD database. An open source website tool ([www.vzdalenostmest.cz](http://www.vzdalenostmest.cz)) is used to compute distances between the capitals of the regions. The descriptive statistics of data is offered by table 1. Table 2 summarises correlations between the variables.

### 3. Estimations and results

#### 3.1 “Standard” Panel Regressions

The estimation procedure follows Mohl and Hagen (2010). First, the model (2) is estimated using the pooled OLS estimator. Then, the fixed effects model is chosen as superior to pooled OLS and random effects model based on the F test (5.23, p-value: 0.000) and the Hausman test (260.31, p-value: 0.000). Since the Wooldridge test of first-order autocorrelation (Wooldridge, 2002) suggests its presence, clustered standard errors are employed to control for serial correlation. Lastly, the method proposed by Driscoll and Kraay (1998) is applied to adjust standard errors for heteroskedasticity, serial correlation and spatial correlation. The results of individual stages of the fixed effects model estimation are summarised in tables 3.

**Table 3: Results of the Fixed Effects Models**

	(I)	(II)	(III)
Variables	Fixed effects (robust SE)	Fixed effects (clustered SE)	Fixed effects (Driscoll- Kraay SE)
$\ln(y_{i,t-1})$	-0.5825*** (0.0640)	-0.5825*** (0.0683)	-0.5825*** (0.1436)
$\ln(\text{innov}_{i,t-1})$	0.0231** (0.0104)	0.0231 (0.0134)	0.0231* (0.0105)
$\ln(\text{ESIF}_{i,t-1})$	0.0094*** (0.0026)	0.0094*** (0.0031)	0.0094* (0.0043)
$\text{infr}_{i,t-1}$	0.0413** (0.0178)	0.0413 (0.0273)	0.0413** (0.0174)
$\text{educ}_{i,t-1}$	0.5422*** (0.2059)	0.5422* (0.2935)	0.5422 (0.3680)
$\text{sb}_{i,t}$	-0.0529*** (0.0076)	-0.0529*** (0.0077)	-0.0529*** (0.0084)
constant	7.1659*** (0.7824)	7.1659*** (0.8082)	7.1659*** (1.7778)
Long-term elasticity	0.0161	0.0161	0.0161
R-squared	0.586	0.586	0.586

Note: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Independently of the estimation procedure, the initial level of GDP per capita is negative and highly statistically significant. This result suggests a presence of the conditional convergence

among regions of the Czech Republic. In other words, the less developed regions catch up with more developed ones. Despite the shorter length of the time series (12 years), the model suggests clear evidence of this process. Nevertheless, the strong conclusion about the long-term convergence process cannot be made. The innovation variable is estimated with a positive impact and in estimations (I) and (III) is significant. The same holds for the variable characterising the level of infrastructure in the regions. The variable capturing the level of human capital is positively related to the regional growth of GDP; however, in the last estimation method (III) it is highly insignificant. The prominent variable of interest (the financial sources from the ESIF) is positive and significant throughout the estimations (I) to (III). The short-term elasticity is estimated to be 0.0094, while the long-term elasticity is equal to 0.0161 suggesting that one percent increase in financial funds from the ESIF per capita increases regional real GDP per capita by 0.9% and 1.6% respectively. The results related to the ESIF are quantitatively similar to those of Mohl and Hagen (2010).

### **3.2 Spatial Panel Regression**

The results reported in the previous subsection (except for the Driscoll-Kraay method) might be biased due to the spatial correlation that is expected to be present. To put it simply, the economic performance of one region can significantly affect the economic performance of its neighbours. The spatial panel data regression method is applied to account for the spill-over effects among the regions.

The estimation of equation (3) begins again with statistical tests aimed to clarify whether the fixed effects or random effects should be employed. The null hypothesis under the Hausman test is rejected (48.32, p-value: 0.000) suggesting that the fixed effects model should be used. Moreover, standard errors are corrected for heteroskedasticity and serial correlation. The results of spatial panel fixed effects regressions are summarised in table 4. The indicator that tests the presence of spatial spill-over effects is given by the significance of the coefficient  $\rho$  of the weighting matrix  $W$ . The coefficient  $\rho$  is positive and highly significant in all cases. Moreover, compared to the results of the previous regressions, the values of the coefficients of the explanatory variables are reduced. This suggests that a certain portion of the explanatory power of variables was caused by spill-over effects.

**Table 4: Results of the Spatial Panel Lagged Model**

	(I)	(II)	(III)
Variables	SAR fixed effects	SAR fixed effects (robust SE)	SAR fixed effects (Driscoll- Kraay)
$\ln(y_{i,t-1})$	-0.4144*** (0.0559)	-0.4144*** (0.0650)	-0.4144*** (0.0742)
$\ln(innov_{i,t-1})$	0.0015* (0.0083)	0.0015 (0.0116)	0.0015 (0.00061)
$\ln(ESIF_{i,t-1})$	0.0069*** (0.0021)	0.0069** (0.0027)	0.0069** (0.0022)
$infr_{i,t-1}$	0.0291** (0.0142)	0.0291* (0.0170)	0.0291* (0.0125)
$educ_{i,t-1}$	0.1909 (0.1705)	0.1909 (0.2160)	0.1909 (0.1951)
$sb_{i,t}$	-0.0260*** (0.0071)	-0.0260*** (0.00852)	-0.0260*** (0.0037)
$\rho$	0.4537*** (0.0631)	0.4537*** (0.0421)	0.4537*** (0.0428)
Long-term elasticity	0.0167	0.0167	0.0167
R-squared	0.6023	0.6023	0.6023

Note: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The signs of all the coefficients are the same as in the “standard” regressions. There is a negative highly significant impact of the initial real GDP per capita. Innovation and the level of infrastructure bring a significant positive impact on the GDP growth rate. A positive effect is attributed to the level of education; however, it is highly insignificant. Based on the spatial lag model estimation, an increase of one percent in financial funds from the ESIF per capita increases regional real GDP per capita by 0.69% on average keeping the other variables constant. The long-term elasticity indicates even a higher impact of 1.7%.

#### 4. Conclusion

Although the use of quantitative methods aimed at the impact assessment of the EU funds is a commonly used approach abroad, there are few such analyses in the Czech Republic. For that reason, the paper contributes to the current Czech literature by (i) investigating the impact of ESIF on economic growth of Czech regions using quantitative modelling approaches and (ii) applying dynamic panel data regression techniques that control for spatial effects. In particular, this paper reveals that the projects co-financed from ESIF for approximately 939 billion CZK in period 2004-2015 do have a positive effect on economic growth of regions of the Czech Republic. Based on the model estimations, a one percent increase of payments from the ESIF per capita leads to a positive impact on the regional GDP per capita between 0.69% and 0.94%. The long-term effects are even stronger, 1.6% to 1.7%. The results also indicate strong regional spill-over effects that have a significant positive impact on the economic performance of regions. Apart from the effects of ESIF, the regression analyses bring evidence of the significant positive impact of innovation and research activities on economic growth. There is also a positive impact of infrastructure development on regional growth in the Czech Republic.

Moreover, the model shows that there is a positive economic convergence among the regions of the Czech Republic.

## References

- [1] Aschauer D. (1989). Is Public Expenditure Productive? *Journal of Monetary Economics* (23), 177-200.
- [2] Calderon C. and Serven L. (2004). The effects of infrastructure development on growth and income distribution. *World Bank policy research working paper no. 3400*. World Bank, Washington DC.
- [3] Canning D. (1999). The Contribution of Infrastructure to Aggregate Output. *The World Bank policy research working paper no. 2246*. World Bank, Washington DC.
- [4] Capelen A., Castellaci F., Fagerberg J. and Verspagen B. (2003). The impact of EU regional support on growth and Convergence in the European Union. *Journal of Common Market Studies* (41), 621-644.
- [5] Dall'erba S. and Le Gallo J. (2003). Regional convergence and the impact of the European Structural Funds over 1989-1999: A spatial Econometric analysis. REAL, University of Illinois at Urbana-Campaign, USA.
- [6] Demetriades P. and Mamuneas T. (2000). Intertemporal Output and Employment Effects of Public Infrastructure Capital: Evidence from 12 OECD Economies. *The Economic Journal* (110), 687-712.
- [7] Driscoll J. and Kraay A. (1998). Consistent covariance matrix estimation with spatially dependent panel data. *The Review of Economics and Statistics*, 80(4), 549-560.
- [8] Elhorst P.J. (2009). Spatial panel data models. In M. Fischer and A. Getis. (eds.). *Handbook of applied spatial analysis*. Berlin: Springer.
- [9] Ertur C. and Koch W. (2006). Regional disparities in the European Union and the enlargement process: an exploratory spatial data analysis, 1995-2000. *Journal of Regional Science*, 40, 723-765.
- [10] Fuente A., Vives X., Dolado J. and Faini R. (1995). Infrastructure and Education as Instruments of Regional Policy: Evidence from Spain. *Economic Policy* 10(20), 13-51.
- [11] Gaspar V. and Pereira A. (1992). A Dynamic General Equilibrium – Analysis of EC Structural Funds (With an Application to Portugal). *University of California San Diego Discussion Paper*.
- [12] Kejak M. and Vávra D. (1999). The impact of structural funds on the Czech macroeconomy: Some preliminary results from the HERMIN model. *Discussion Paper Series CERGE-EI*. Discussion paper no. 1999-27.
- [13] Křístková Z. (2012). Impact of R&D Investment on Economic Growth of the Czech Republic - A Recursively Dynamic CGE Approach. *Prague Economic Papers*, 21(4), 412-433
- [14] Křístková Z. (2013). Analysis of Private R&D Effects in a CGE Model with Capital Varieties: The Case of the Czech Republic. *Czech Journal of Economics and Finance*, 63 (3), 262-287.

- [15] Kulhanek L. (2014). Debt Crisis and Convergence in the European Union. In *International Conference on European Integration 2014*. Ostrava: VŠB-TU Ostrava, Faculty of Economics, pp. 401–409.
- [16] Maynou L., Saez M., Kyriacou A. and Bacaria J. (2014). The Impact of Structural and Cohesion Funds on Eurozone Convergence 1990-2010. *Regional Studies* 50(7), 1127-1139.
- [17] Ministry of Regional Development (2006). Quantitative assessment of the estimated impact of the NDP/NSRF using a macroeconomic model for the Czech Republic. GEFRA, Münster.
- [18] Mohl P. and Hagen T. (2010). Do EU structural funds promote regional growth? New evidence from various panel data approaches. *Regional Science and Urban Economics*, 40, 353-365.
- [19] Oancea B., Pospíšil R. and Drăgoescu R.M. (2017). Higher education and economic growth: a comparison between the Czech Republic and Romania. *Prague Economic Papers*, 26(4), 467–486.
- [20] Pellegrini G., Tarola O., Bussilo F., Muccigrosso T. and Terribille F. (2013). Measuring the Impact of the European Regional Policy on Economic Growth: a Regression Discontinuity Approach. *Papers in Regional Science* 92(1), 217–233.
- [21] Rodríguez-Pose A. and Novak K. (2013). Learning processes and economic returns in European Cohesion policy. *Journal of Regional Research*, 25, 7-26.
- [22] Röller L-H. and Waverman L. (2001). Telecommunications Infrastructure and Economic Development: A Simultaneous Approach. *American Economic Review* (91), 909–23.
- [23] Wooldridge J.M. (2002). *Econometric analysis of cross section and panel data*. The MIT Press, Cambridge, MA.





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